DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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RAYNOLDS & NOURSE, PROPRIETORS. OFFICE....QUINCY HALL. SIMON BROWN, EDITOR. FRED'K HOLBROOK, } ASSOCIATE HENRY F. FRENCH, } EDITORS.

FARM WORK FOR APRIL.

Fitful April has come again, with sunshine and tears, with singing birds, soft breezes and flowing streams. Right welcome, April! Fitful and uncertain as thou art.

"To see thee smile, all hearts rejoice;
And, warm with feelings strong,
With thee all Nature finds a voice,
And hums a waking song.
The lover views thy waking hours,
And thinks of summer come,
And takes the maid thy early flowers,
To tempt her steps from home."

We believe there is no heart so dead to the influences of nature but is wakened into new life by the return of spring. To us it is like waking into a new existence, a new world of light, and life, and beauty. Nature has a new *voice*, as well as life. The birds pour forth their songs—the herds low and sheep bleat, and bring forth new generations of animal existence to the enjoyments of a new life. The soft south winds and gentle showers touch the branches of the trees and swell the buds for future fruit, while the brooks, glad to be unchained from winter's frost, babble their praise as they go rejoicing on their way to the rivers and the sea. "Fresh leaves and flowers deck the dead season's bier;" there is one of them—the primrose! This early child of spring, "that comes before the swallow dares, and takes the wind of March with beauty," is a peculiar favorite. O, come with us for a day into the country—and thou wilt be the better for it all the year after.

But we cannot pause to be sentimental; the spring *has* come, and with willing hands and stout hearts we must be "up and doing."

A careful review of the whole farm becomes necessary this month. The trees, shrubs and plants of every kind should be examined to see what effect the winter has had upon them. Young nursery trees may have been thrown out by the frost; if so, they should be carefully reset as soon as the earth is sufficiently dry. Clean up the currant and gooseberry bushes and cut out the old wood. Do the same to the raspberries, and if it was not done last fall, trim, and tie them up to a stake in hills, or to horizontal bars.

DRAINS.—Look to the drains, and set them flowing if the spring floods have choked them; or if they have gullied the mowing, planting or pasture lands, improve the earliest moment to level them up and scatter a little grass seed where it is needed.

FENCES.—Leave no rod of these unnoticed; mend up the wall gaps thrown down by frost; and add a new rail and post at weak points. If your cattle once go through, it will require double the strength to resist them afterwards. They understand a weak spot in a fence, and a *man too*, sometimes, quite well. Lay up that bit of stone wall which you have *been intending to do* for some years. Thistles and foul weeds are taking possession of the ground among the loose stones, and will scatter their seeds over your fields.

GRASS LANDS.—Cattle should not be allowed to run upon the mowing fields in the spring. They poach it badly, making it inconvenient to mow and rake, and they get a taste of green grass, which makes them dainty of dry food afterwards, and probably will mutilate more young trees than you will have patience to look at after the mischief is done.

THE HOT-BED.—This may be one of the most simple contrivances; it may be made without hammer or nail, if you desire it, by driving small stakes by the sides of four boards to keep them on their edges, and sloping the whole to the south. This may be filled with fine loam and rotten manure, and your delicate seeds will come up just as well as in a gilded frame. But a substantial hot-bed would be cheaper in the end. Start lettuce, tomatoes, radishes, peppergrass, or any thing else that you may fancy, early, and by a little attention you will get a supply of excellent and wholesome vegetables, far better for the system in the spring than a principal beef and veal diet.

PLOWING.—By the time the review of the farm has been gone through with, the fences repaired

and garden cleaned up, the wind will have swept away the redundant vapors, and the earth become drained of its surplus waters, and ready for the plow. But this important operation should not be done when the soil is so moist as to leave the furrow in a wet, heavy clod. If stubble ground, it should be so dry as to fall to pieces upon leaving the mould board, or if inverted sod, dry enough to come into a fine tilth upon being harrowed. Make experiments; where you have plowed but six inches, try nine, on a portion of your land, or, where you have plowed nine, go down twelve inches this year, if you can.

GRAIN.—Get in barley, oats, &c., as soon as the soil will permit, and where laying down to grass, be generous with the seed. Our practice has been to sow one bushel of red top, one peck of herd's grass and six pounds of clover seed to the acre, but are satisfied that the herd's grass should be increased to twelve quarts. Unless it is exceedingly inconvenient, roll the land well after the seed has been harrowed in. Level balks, fill up holes, and give the field a neat and finished appearance; the facility and comfort in mowing, raking, and getting the hay will more than repay the cost. On this subject the reader is referred to an excellent article in the *Farmer* for last year, page 148, by our associate Mr. HOLBROOK.

TREES.—As soon as the soil is dry enough to fall into fine particles upon being stirred, young trees and shrubs may be transplanted. Be careful not to delay this work too long. Dig holes six feet wide by eighteen inches deep; return the top soil to the bottom of the hole; mingle a little well-rotted compost with this, and set the tree level with the surrounding soil. Take up the trees from the nursery with great care; do not *pull them up;* this breaks the fine spongioles upon which the tree will be dependent for its existence; if any roots get bruised or broken, trim them with a sharp knife; spread the roots, and sift the fine soil among them.

GRAFTING.—Your scions were probably cut in February or March, and have been kept moist and fresh. As soon as the weather will allow you to work the wax, begin to set them, so that you may accomplish all work in its appropriate season.

APRIL!—Now is the time for action. While your physical powers have become stronger by a season of comparative repose, your minds are enriched by many a useful lesson from the experiences of others, and stored with hints from the books, which you can observe and decide upon as you pursue the spring and summer culture of your fields. All is in order out of doors, while love, affection and gratitude are the duties which cluster about the family board. Let one impulse, one aim impel you all, and charity and good-will grow in your hearts as you tend your growing crops.

For the New England Farmer.

PROFITS OF FOWLS.

MR. BROWN:—Being a constant reader of your most valuable paper, I take quite an interest in the many useful communications therein on the experiments in poultry. I have read the communication of your Stonington correspondent, W. C., and with your permission, will state the result of an experiment on a small scale, and wish it understood that my fowls are kept for the profit on their eggs only.

On the 31st of December, the account stood thus:—

	Dr.
25 fowls, at 25 cents each	$6,25
Interest on the same	37½
20 bushels of corn and meal	15,43
	$22,05½
	Cr.
2352 eggs, or 196 dozen	26,07
13 fowls used, at 25 cents each	3,25
2 do. at 50 do.	1,00
Manure	1,50
21 fowls on hand, at 25 cents each	5,25
	$37,07
Deduct old stock and expense	22,05
Profit	$15,02

Assuming the mean number of fowls to be 23, the cost of keeping is about 67 cents each, and the profits on each fowl 65 cents. It will be seen that my fowls are profitable as layers, and that is what we most want in this vicinity; it also proves that fowls can be kept upon grain, with profit, and at a much less expense than the estimates of your correspondent, W. C., who says a large portion of his fowls are Shanghae, and that it costs but little more to keep this kind of fowls than the natives. He also says, "my experiments prove the Shanghaes the easier fowl to keep." I must differ from W. C., on that score. First, he has stated that the cost of keeping his fowls, after his method, is 89 cents per head, while it has cost to keep mine on grain only 67 cents, which is 22 cents in my favor. Notwithstanding the accounts of the annual average, that he has alluded to being about $1,10 per head, it may appear, at the first glance, that W. C. has made great profits; but by comparing our accounts, I think there will be a different conclusion. In the first place, W. C. values his fowls at 67 cents each, while mine are only 25 cents; and those he sold and used, at 43½ cents, while mine are at 25 cents, except two at 50 cents each; and his stock on hand at $1,31, more than five times the value I set upon mine, which is 25 cts. There is also quite a difference in the price of eggs sold; W. C.'s brought over 18 cents per dozen, while mine brought a little over 13 cents. Now why is there so much difference?

I have not stated what kind of fowls mine are, neither my method of treatment, for the reason that I don't wish to take up the room of your excellent paper. But if this should be expected, I may, after my manner, communicate more.

Duxbury, Mass., Jan. 24, 1852. L. H.

☞ We would call the particular attention of the reader to the Legislative report at the State House on the 16th inst. The report of Col. WILDER will be found of great service to those who are selecting fruits. Mr. FRENCH has had a long experience in cultivating fruits, and we are happy to give the list which he reported.

For the New England Farmer.

CANKER WORMS.

BY T. W. HARRIS.

Canker-worm moths have already made their appearance. My trees were tarred on the 10th of March, and many of the moths came out of the ground and were caught in the tar during the night of the 13th instant. Others may be expected to appear till the end of the month, and will endeavor to ascend the trees in order to deposit their eggs. A few of the parent insects may lay their eggs on the trunks of the trees; but the greater number proceed to the extremity of the branches, and deposit them in small clusters, upon the twigs and buds. The trees most subject to the attacks of canker-worms are the apple, cherry, plum, mountain-ash, linden, and elm. When trees have been exposed to the unchecked depredations of these insects during several successive years, they become impaired in vigor, and decay prematurely. In order to protect them, they should be tarred seasonably and repeatedly in October and November, and again in March; or some other approved and effectual remedy should be employed, to prevent the parent insects from ascending the trunks and laying their eggs. A large proportion of the insects that rise in the autumn are wingless females; and, on the contrary, more males than females ascend in March. It seems difficult to account for this disparity of the sexes at these two seasons, unless some of the females survive the winter upon the trees, to pair with the males in the spring. I am not aware, however, that any observations have been made confirming this suggestion. The eggs are hatched about the first of May. The young canker-worms, then less than a twentieth of an inch in length, immediately conceal themselves in the opening buds, and begin to eat the leaves before fairly expanded. They are very injurious to grafts, and sometimes entirely destroy the buds before their presence is discovered or suspected. A thorough syringing of these, and of small trees and shrubs, with a solution of whale-oil soap, has appeared to be a good remedy. This application may be made in May and early in June. When trees, infested with canker-worms, are suddenly jarred or shaken, the worms drop off, and hang suspended by threads, but soon climb up again by means of these threads. If, however, the connection of the dangling worms with the trees be broken off by striking the threads with a pole, the insects will have no means of mounting the trees again but by creeping up the trunks, and this they may be prevented from doing by a belt of tar about the trees, or by leaden troughs filled with oil.

Many kinds of destructive insects are found to prevail and to disappear at irregular intervals. Beginning with a few, they continue to increase in numbers during several successive summers, till at length, after a season marked by an extraordinary abundance of them, they retire from the scene of their depredations, not to return in the same force, for several years. During such intervals, when none or few are seen, vegetation, if not too much exhausted, has time to recover before the reappearance of new and successively increasing swarms of the spoilers. Among the insects, whose irregular visitations and disappearance have been observed, are rose-bugs, cherry-slugs, grasshoppers, apple tree caterpillars, salt-marsh caterpillars, and canker-worms. The cause of the disappearance of these insects seems not to be well understood. Various reasons have been assigned therefor, such as wet weather, cold winters, pestilence, and the diminution of their accustomed food. The true cause seems to have been overlooked, namely, the rapid increase of the natural enemies of these insects, which, in the course of a few years, become so numerous as to overpower them completely, and put a sudden stop to their depredations.

Canker-worms have many enemies. They are devoured by moles, and by various kinds of birds, such as the king-bird, oriole, black-poll warbler, black-throated bunting, chickadee, and especially the cherry-bird, which lives almost entirely upon them till cherries begin to be ripe. They are eaten by a very large and splendid green beetle (*Calosoma scrutator*,) that appears about the time when these insects begin to leave the trees. These beetles do not fly, but they run about in the grass after the canker-worms, and even crawl up the trunks of the trees to catch them as they come down. During the prevalence of canker-worms, in the years 1839, 1840, and 1841, great numbers of these beetles were observed in Cambridge, where they have been seldom seen at other times, and many were thoughtlessly crushed under foot in paths and the highways. The potter-wasp (*Eumenes fraterna*,) an insect rather smaller than the common brown wasp, fills her clay cells with full-grown canker-worms, often gathering eighteen or twenty of them to supply her future brood with food. A four-winged ichneumon-fly, also stings them, and lays in each one a single egg, from which is hatched a little maggot that consumes the fat of the canker-worm, and causes it to miserably perish. I have seen one of these ichneumons sting several canker-worms, in succession, and swarms of them may be observed around the trees as long as the canker-worms remain. Among a large number of canker-worms, taken promiscuously from various trees, nearly one-third were unable to finish their transformations, in consequence of being preyed upon by the maggots of a two-winged fly, or *Tachina*. Even the eggs of the canker-worm moth have their parasites, which destroy great numbers or prevent their hatching. This kind of parasite is a tiny four-winged fly, a species of *Platygaster*, which goes from egg to egg, and puncturing them, drops one of her own still smaller eggs in each. Sometimes every egg in a cluster will be found to have been thus punctured and seeded for a future harvest of the *Platygaster*. The young parasite, hatched within the canker-worm egg, the shell of which, though only one-thirtieth of an inch long, serves for its habitation, and the contents for its food, is an exceedingly minute maggot, which becomes a chrysalis within the same shell, and finally is transformed to a *Platygaster* fly like its parent. All these enemies will be found to abound when canker-worms have prevailed during several years; and to them chiefly, if not alone, I cannot but attribute the sudden check that was given to the further increase of these destructive insects in the summer of 1841, when their ravages seemed to have reached their height in this vicinity. From that time till the year 1847, scarcely a canker-worm was to be seen here. But the race was not extinct; and enough continued and multiplied, year after year, to seed

the ground, on their descent into it, for annually increasing harvests. They are now evidently gathering in greater numbers; and, unless a timely check be put to their further increase by natural or artificial means, they will continue to multiply and spread desolation in the same places that their former generations have laid waste.

T. W. HARRIS.

Cambridge, March 15, 1852.

LOOK OUT FOR YOUR HORSES.

One of the exceedingly troublesome diseases to which horses are liable is the "Grease," or better known among us as "Scratches." It is an inflamed state of the space between the fetlock and the coronet of the hoof. In a healthy state no velvet can be more soft to the hand than this, and with this softness it has an oily touch, which one would scarcely look for in a part so much exposed to dust and dirt. The disease sometimes attacks all the feet, but the heels of the hind feet more frequently. After inflammation has existed a short time the skin becomes dry and cracks, and soon the part is raw and very tender.

The cause of the disease is undoubtedly the want of proper attention. The horse is driven through the cold mud, and perhaps is left standing in it for two or three hours during the day, and then returned to the stable with a portion of it adhering to his heels. This absorbs the peculiar oil that is upon the surface and perhaps checks its secretion, until dryness and cracking of the skin takes place. The best way, then, is to *prevent the disease by proper care.* Whenever the animal is returned to the stable during muddy travelling, the legs should be thoroughly cleaned, and briskly rubbed for a minute or two, and the pastern washed and wiped dry. But if the disease is there, washing, and the application of soft oil or grease, will soon effect a cure. Horses that are passing through the barn yard frequently, will be likely to contract the disease. If the scratches extend up the legs, or are very bad on the heels, wash with castile soap and warm water.

Foul in the foot of neat cattle is occasioned by exposure to the strong substances through which they pass in the barn-yard, or standing in them and in the cold mud while loading manure. A careful farmer will wash their feet on returning them to the leanto for the night. Scratches are sometimes caused by allowing the horse to stand where the urine, manure and other dirt, is allowed to gather under his feet.

VENISON.—Moose and Deer meat have been abundant in this market through the winter. An old patriarch Moose of the forest laid ignobly in the dust before our door the other day, with widely-branching antlers and prodigious lips. We thought he would weigh ten hundred pounds. Yesterday, a large wagon load of fine deer was in South Market Street. We hope the hunters will not exterminate the race in the forests of Maine. It is a lubberly business to shoot or knock down a deer wallowing neck deep in the snow; but to lie in wait on the sunny slopes of Virginia, and after some hours, perhaps, of intense expectation, see the noble buck springing down the vale, send the fatal bullet through his heart, witness the bound into the air and the last plunge to the earth, is another sort of hunting altogether.

For the New England Farmer.

PLOWING.

BY R. B. HUBBARD.

How oft should the earth be disturbed by the plow? This is a question of much practical importance to the farmer. Plowing is an expensive operation, and unless beneficial, should be avoided as far as possible.

Hesiod, a contemporary of Homer, states that the Greek farmers plowed their ground three times for each crop. First in autumn, then in early spring, then just before planting.

With the Romans it seems to have been a common if not invariable practice, to plow twice for each crop.

In modern times, the fallowing of ground for winter grain is a common practice, both in Europe and America. Now what is the object of this fallowing, as it is termed? If it be simply to pulverize the soil and render it pliable, that might better be accomplished by plowing once and harrowing. This is not the object,—certainly not the sole, nor the principal object. 'Tis to convert whatever vegetable matter may have grown from the soil into nutriment for the new crop. Farmers often speak of letting land *rest*, as though, like an animal, it would regain strength by repose.

This I deem to be incorrect. Take a quantity of earth and place it under an exhausted receiver, and there suffer it to remain a century. It will contain no more strength, no more fertilizing properties, than before. But allow it to be exposed to the atmosphere for one day, and it will gain strength.

That the air is the principal source of fertility can easily be shown. Allow a piece of ground, which has become so exhausted that it will not pay for cultivation, to remain at rest, for some thirty years, and what do you find upon it? From thirty to fifty cords of vegetable matter, besides the stumps and roots with which the earth is filled. And this is not all. Upon removing the wood it will be found that the soil has become rich with fertilizing matter, and that for a number of years it will produce large crops of grain and grass without manure. Whence comes this fertility? From what source has this exhausted soil derived the materials for such crops?

Let us subject the product to the test of fire. The wood is consumed and there remains but the ashes. As I have before remarked, less than *one-tenth* of the material of which the wood was composed remains. The other *nine-tenths* have assumed a gaseous form, and have mingled with the atmosphere, to be wafted to other fields and to enter into the composition of other vegetable matter. The ashes which remain are earthy matters, in

the form of soluble salts, alkalies, and alkaline earths, &c. The earthy matter may have been taken from the soil, but the vegetable or organic matter cannot have been derived from that source, for the very plain reason, that the soil now contains far more vegetable matter than thirty years before. Hence, the conclusion, to which I have before arrived, seems irresistible, that vegetables derive most of their sustenance from the air. Hence, to increase the fertility of the soil, we must frequently expose it to the atmosphere, and that in such a manner as to allow the air to permeate as low as the roots of plants are expected to penetrate.

The object of fallowing then is two-fold. First, to turn under and expose to decay whatever is grown upon the surface; and this should be done at the time when the amount of vegetable matter is greatest; and second, to expose to atmospheric action that portion of the soil from which it has for a time been excluded.

In answer to the question, how often should land be plowed, I should say, much more frequently than our farmers are in the habit of plowing. The practice of mowing land from five to seven years, as many farmers do, is a ruinous one. It is in perfect keeping with the policy of the teamster, who drives his team on short feed, till they are reduced to skeletons and utterly incapacitated to draw any thing but an empty wagon, and then commences nursing and giving them extra feed that he may restore them to their wonted strength and vigor. Far better to *keep* the team in good condition in working order. And so of the land. Let it be mown, at most, two years, and in the fall of the second, or spring of the third, turn under as much grass as can be covered, and there will be no need of twenty cords of manure to the acre to secure a crop of corn and keep the land in heart.

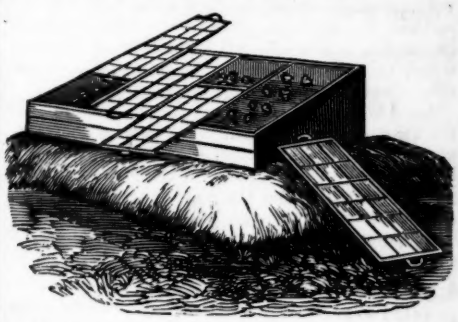
If my position is tenable, namely, that plants derive a large portion of their nutriment from the atmosphere, worn-out lands may be reclaimed by *plowing*. I think it will be found generally, that in lands exhausted by continuous *skinning*, there is a lack of organic, rather than inorganic matter. Or perhaps more correctly, that the deficiency in the former is greater, in proportion as it enters more largely into the composition of plants, than the latter.

Take, for example, an old field, which has been exhausted by continuous cropping with rye. It will be found by analysis, that there is a deficiency of potash, lime and phosphorus, also an almost entire destitution of vegetable matter. The earthy or inorganic substances must be supplied by the cultivator. To the vegetable matter the soil will help itself, only give it a chance. Plow thoroughly about the first of June, seed lightly with buckwheat, and harrow in some five bushels of ashes to the acre. Plow again when the buckwheat is in bloom, and sow a little clover seed, say four lbs. to the acre, rolled in gypsum. Let it remain one year, and repeat the last process, increasing the quantity of clover and using phosphate of lime instead of the sulphate. In this manner, lands which are all but worthless, may, with comparatively little expense, be rendered productive.

This is not mere theorizing; I give the result of observation. One of the most practical farmers in the State has tested the efficacy of this process on various soils and with most satisfactory results.

Thousands of acres, in this commonwealth, not now yielding enough to pay for fencing, might, by this simple process and trifling outlay, in the course of five years, be restored to their original fertility.

A CONVENIENT HOT-BED.



Early vegetables are not only palatable, but healthy. They come at a time when the system does not require so much stimulant as animal food imparts, and compose that which is suitable for the season. A person having the merest patch of land may have a hot-bed and start some of the choice vegetables for early use, such as peppergrass, lettuces, tomatoes, early cabbage, celery, &c.

We have had the above cut engraved to give the idea of a cheap and convenient hot-bed; one that will require but little room if you have but small space, or that may be enlarged or multiplied at will. They should be made low, as the wind is much less likely to blow off the sashes. The reader is referred to our last year's volume, page 123, for a plan of a hot-bed still more cheap and simple, and which is accompanied with directions for preparing the soil and planting seeds.

For the New England Farmer.

LATE KEEPING APPLES.

BY O. V. HILLS.

GENTLEMEN:—There are but few first-rate varieties of apples under cultivation which will continue sound and retain their flavor till late in spring, or even to midsummer, like the Roxbury Russet and some others. It is very desirable that new kinds of this class of fruit should be obtained, as good late apples will command an extra price, the supply at present not being equal to the demand. The Northern Spy is an excellent late variety, and should it prove to be adapted to this region, will be a valuable acquisition to the list. It originated in the State of New York, and it is well known that kinds which are first-rate there, are, some of them, at least, not worth cultivating here in New England. It would, therefore, be well to wait till this kind is proved as to bearing, adaptation to climate, soil and other respects, before entering largely into its cultivation. I saw the Northern Spy in fine condition the last of May, the past season; they were taken from a barrel for which a man had just paid six dollars, had not lost their flavor, and were perfectly sound.

There is no doubt but there are many long keeping varieties of great merit among our native apples, which have never been brought into public notice. It is desirable that they should be sought out and proved, and such as are found worthy of propagation, widely disseminated; it perhaps might be advisable for our horticultural societies to offer a premium for the best late keeping apple; this would call out many kinds from which to make a selection, altogether new, as the offer should embrace native or seedlings only.

Good late sweet apples have been much inquired for, for several years past. In this region there are not enough grown for home consumption. We have many varieties of fine Winter Sweetings, and it is singular that there are not more of them cultivated. The Danvers Winter Sweet, Seaver's Sweet, Tolman's Sweet, and many others which might be mentioned, will always sell quick and at good price in market.

Apples are peculiarly refreshing in the early part of summer, when the warm season commences, and other fruit is not to be had. After the cherries and other fruits begin to ripen we can dispense with them better; but the extra price which good late apples will always demand, if nothing else, should induce fruit growers to search out and cultivate the best of them. O. V. H.

Leominster, March, 1852.

For the New England Farmer.

WHEAT---CORN---HENS.

Friend Brown:—We have received and read the *N. E. Farmer* from its commencement, and have been satisfied that the dollar paid annually for it has been returned to us in a four-fold proportion, and not wishing longer to remain "as barren sands which imbibe the shower and render neither fruit nor flower," will give to the public, through the columns of the *Farmer*, our success in raising winter wheat, Indian corn, and a few remarks on hens.

In the 8th mo., 1850, we spread 4 cords of good stable manure on 3-4 of an acre of what is called in this vicinity good corn land, (which in the previous month yielded not more than one ton of hay per acre,) plowed it in, rolled and harrowed with a light harrow, sowed 3 pecks white flint wheat, worked it in with a harrow and seeded with timothy and red-top. In the 7th mo., 1851, harvested the wheat, which appeared fine, threshed it the following month, and obtained 21 1-2 bushels of as good heavy grain as we could wish to see. The ground appeared to be well seeded, and we shall be disappointed if we do not obtain 2 tons of hay per acre the next season.

A writer in the *Farmer* says that Indian corn is not a good crop to raise after potatoes. We do not know what he calls a good crop, but we feel pretty well satisfied with 60 bushels to the acre, which we have raised for the past three years on land which bore a crop of potatoes the previous year by giving a dressing of stable manure. Last season we had one acre of sward land by the field where potatoes grew the previous year; both were manured alike and the cultivation was the same. The yield was at least one-fourth less on the sward land, which does not agree with the theory of said writer.

One year ago the 10th of this month, we had 50 hens, mostly the old-fashioned Yankee hens, a few of them crossed with the Poland and Yellow Dorking. In the course of the spring and summer 10 or 12 of them died—raised 53 chickens, and obtained 450 dozens of eggs in 1851. Eggs sold amounted to a trifle over $62.00. This winter we have a few pullets of the China breed, and are satisfied that they begin to lay younger and lay more in cold weather than any breed we have ever kept. Batley & Aldrich.

Blackstone, 2d mo. 23d, 1852.

HAY AND GRAIN.

The culture of hay and grain, with the pasturage of cattle, engrosses no small part of the farms of New England. Full three-fourths of all the labors of the farmer are applied to these objects. Take a well averaged farm of 160 acres, 120 of which are said to be in a state to be cultivated, and how will you usually find it subdivided? Probably 30 acres devoted to mowing, 10 acres to the growing of grains, 60 acres to pasturage—the remaining 20 acres, to orcharding, and various other purposes. This is not an unfair view of the subdivision of our farms—and here we see a major part of the whole ordinarily used for the purposes mentioned.

How much stock will be kept on such a farm, when well managed? Perhaps 12 cows, 4 oxen, and 2 horses—supposing it to yield 30 tons of hay, 400 bushels of grain, and a balance of vegetables sufficient to complete the feed of the stock. This, if we mistake not, is a fair sketch of Yankee farm management. Now, on such a farm, it is apparent that the profits must accrue principally from the milk of the cows, and the grain products; and he must be a skilful manager, who can realize an income, over and above the cost of labor, of $400 a year on such a farm, without charging any interest on the cost of the farm.

If any system of management can be devised, whereby *fifty per cent.* can be added to the crop of hay and grain, without an essential addition to the labor, except that of gathering them in, it is apparent that the annual income of such a farmer will be changed from $400 to $600. He who shall demonstrate how this change can be brought about, will be entitled to be classed among the friends of the farmer.

We know it is much easier to imagine castles in the air, than to erect them; but still, it does not necessarily follow, they never can be erected. Stranger things have happened. Who would have believed, thirty years ago, that beef and pork could have been transported from the valley of the Ohio to the shores of the Atlantic, for *half a cent* per pound; and that so great would be the overflow of these products, from these regions, as to crowd our own supplies from the market? May we not, by proper care in tillage, produce two tons of hay to the acre instead of one? Suppose the

earth should be stirred *nine inches* deep, instead of six, and the application of manure should be in the same proportion; and a little more *elbow grease* should be applied to the pulverization of the surface soil, and occasionally a *subsoil plow* should be passed through the next stratum of nine inches of earth below the surface, who can tell what would be the result of such operations? Instead of two tons to the acre, we have well authenticated accounts of more than four tons to the acre having been thus produced. Mr. Clapp, of Greenfield, recently stated that the very last season, he raised four-and-twenty tons of fodder, from six acres—on land not extraordinary for its fertility. What can be done by Mr. Clapp, can equally well be done by others, by the application of the same skill and industry.

The fact is, our farmers spread their butter upon their bread *too thin*—if they would concentrate their energies upon a few acres, instead of many, they would find the results of their labors more encouraging. It would not be difficult to point out those, who by well applied energies, on half a dozen acres, secure a better living, and better income, than many others who possess ten times the quantity of land. When we look at the many acres of unproductive pasture lands that meet the view, wherever you ride, it is impossible to suppress the reflection, that there still remains much room for improvement. Perhaps, more on the pasture lands connected with our farms, than any other. Whether this shall be done by stirring the soil, or by top-dressing with *plaster*, or some other stimulant to vegetable growth, is a fair subject for inquiry.

For the New England Farmer.

PRUNING AND GRAFTING OLD APPLE TREES.

BY N. P. MORRISON.

Mr. Editor: — If I were as well qualified for handling the pen, as I am of many implements of farming, I would try to contribute through the medium of the agricultural journals many inducements calculated to raise the standard of farming to one of the most profitable and delightful avocations in life. I have had considerable experience in pruning and grafting. The success which has attended my labors, and the profits derived, have drawn my attention more particularly to this branch of husbandry, which I think has been too much neglected by farmers in general. I have found by observation, while travelling in the country, that there are thousands of worthless apple trees, impoverishing the land without giving the owner a fair compensation. Farmers and others ought not to be so negligent of their own interest, as to disregard every inducement which may be found in reading agricultural journals, and otherwise calculated to stimulate them to action, progress and wealth.

As regards pruning and grafting, I have been my own adviser, although I have had friends who are more experienced fruit growers than myself, frequently caution me in regard to my method of pruning, and they have confidently asserted that my course of treatment would prove a serious injury to the trees. Now I would say to farmers, and all who are concerned in fruit growing, be cautious whom you employ to execute the labor which is necessary to make your trees admirable for their beauty, and a lasting benefit in the production of fruit. I took a journey last June into New Hampshire, and as I went with my own carriage, it gave me a good opportunity of examining the progress which farmers were making in improving the soil and fruit trees. In regard to the latter, I must say that according to my judgment and experience, many are most wilfully, or ignorantly imposed upon.

In Lowell, I had the opportunity of examining the operations of grafting, and I came to the conclusion that the operator shook the trees and caught the birds, while his employer's anticipations would not be realized. The grafting, I think, was done by the job, so much per scion, and the bill for two small trees amounted to almost five dollars, when all the labor which was necessary in doing the work could have been done for less than one half that sum. The number of scions set was too many. One half the number would have been all that were needed to form a good tree. I noticed there were several small branches within a few inches of each other; from six to ten scions were set where there should have been but two, by cutting the limb below where the branches separated. Another error in grafting is, in leaving limbs too near the scions when set, so as to impede their growth; this should always be avoided. Other trees I have noticed frequently while travelling which had a few marks where grafting had been attempted by having six or eight scions set in the low limbs where twenty or thirty were necessary to have formed a good tree. I saw a man grafting for a friend of mine, and as he was an experienced workman, I had the curiosity to stop and examine the trees, and ask a few questions in regard to grafting, hoping to gain some information in so doing. His scions were set in a few of the middle branches, and according to the appearance by grafting so few stems, he did not intend to injure the trees but very little, for the scions would eventually be left, in the few instances above named, to take their own course, consequently they would be overrun with branches and left to wither and die. I inquired why he did not set more scions in a tree? His reply was, the man who employs me wants to make all the cider he can. I suppose he meant until the scions came to maturity. This we see is economy outdone.

I have found some trees which had twice the number of scions set requisite to form a good top, while others fell short in the same proportion. Now it will appear from the many observations I have made, that farmers and many others who have land and trees to improve, feel conscious that something ought to be done in renovating and improving their fruit trees in order to give them a profit which is realized by thousands who have their work thoroughly done. Therefore, give the farmer knowledge, perseverance, (and I must say) temperance, these all combined, will give him the satisfaction of seeing his labors crowned with abundant success.

I have about eight acres of orcharding, and have so managed in pruning and grafting as to

give all the old trees mostly new and vigorous tops. I commenced in 1842, taking off the large and low limbs which were in the way of the team when plowing, and continued the same process yearly until my horses could walk without coming much in contact with any of the limbs. I found that taking off the under limbs (which is too much neglected) increased the growth of what remained, new shoots came forward, which now compose a good part of my trees. Too many large limbs should not be taken from a tree in one season. I have cut off limbs that were six or seven inches in diameter, and have applied cold beef tallow to the trunk where they were cut, and the trees have done well. My pruning is mostly done in Feb. and March, scraping the trees immediately after, which I think well pays for so doing. I keep the land plowed and tilled, where it is not too much shaded. Grafting I have done in April and May. There were about forty large New York Greenings, which proved to be almost barren and worthless. I have grafted all of these, and many more which bore inferior fruit. I have sold the apples which grew on two of them the past season, for over fifty dollars, and the sum total for all the last season will amount to seven hundred dollars. I was informed that sixty-two barrels was the most ever raised in one season previous to my purchasing the farm.

I state these facts for the encouragement of others, that they may see what can be realized in reclaiming and improving old apple trees. The process in setting scions is very simple, but the number needed, and where to be set, in order to give an even and well balanced top, requires both care and judgment.

Trees should be thoroughly examined in order to see where, and how many limbs should be grafted, to give each an equal division or space to grow in, and make a well shaped top. I generally commence at the highest branches and work downward, so as not to interfere with the scions after setting. Do all the grafting to each tree in one season, leaving a few scattering limbs that will not interfere with the scions, for one year, then take off all remaining limbs and leave the sprouts except when near the scions for one year, then cut all, or most of the sprouts, and leave but one scion on a stalk, if the growth has been good, if not let the two remain a longer period. Never graft very low limbs, for they always incline downward after bearing fruit.

Thus, I have given an imperfect sketch of what has come under my observation for a few years past; my object has been to impart a little practical knowledge to all who feel an interest in advancing the cause of fruit growing.

I am aware there are some experienced fruit growers who disagree with me in some respects; all trees should not be treated in the same manner. Trees that have a sound trunk and a healthy appearance, pruned and grafted in the manner I have prescribed, will give satisfaction, I think, to all who try the experiments. All I have to say farther on the subject, is, come and examine for yourselves, and, in so doing, will oblige a friend, and one who has labored hard to acquire a little knowledge of one of the most essential arts performed in agriculture. N. P. M.

Somerville, March 2, 1852.

N. P. MORRISON'S ORCHARD.

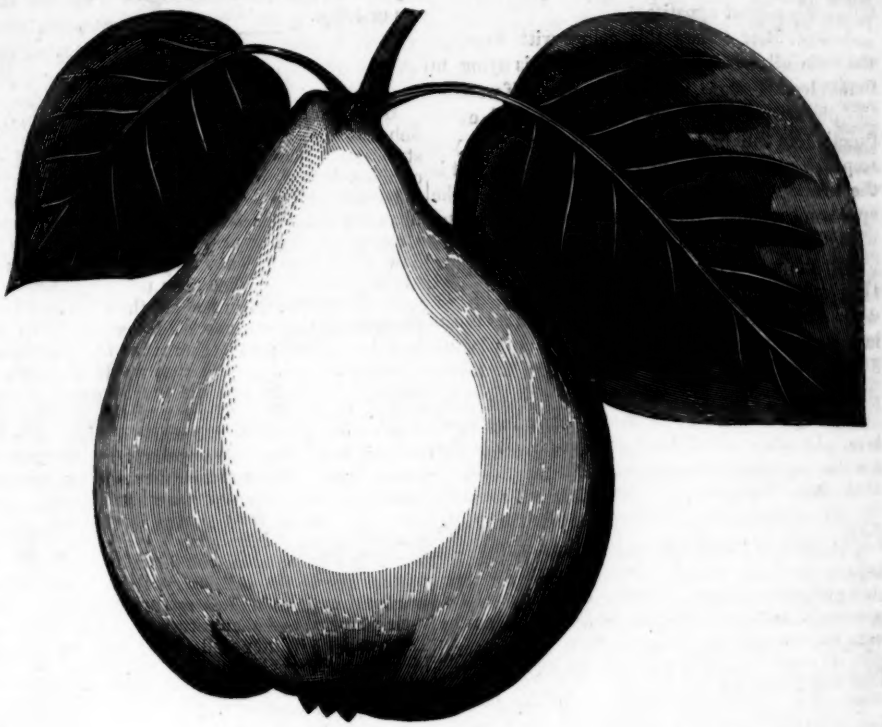
The evidence of good farming is in a succession of good crops, cultivated in such a manner as to yield a fair profit. Under this test, our friend Morrison, who has a communication in another part of this paper, on "Old Orchards," is a good farmer. We have looked at nearly every tree on his eight acres, and found most of them with well-balanced tops and in a healthy condition. The stems of many of them had been raised from two and three feet in length to four and five by cutting off limbs which were suffered to remain so low down that it was impossible to cultivate, or even walk, under the trees.

Mr. Morrison is a man "after our own heart."—We not only examined his orchard, but saw his interesting family, and ate salt with him at his table, and when these were done, had a trial of skill with him in *music* in the parlor. He had cultivated the Graces as well as grasses, and with his son and two daughters, piano, and a labarynth of brass tubes in the hands and mouth of the son, there were five of us that made the crotchets and semiquavers fly faster than chaff ever went from a winnowing mill! Because a man prunes, that is no reason why he shouldn't play the piano, but a good reason why he should—he can afford it; and because he sows he has a better heart to sing. We always sing when at work in the vicinage of the birds, and if they like our music as well as we do theirs, all we have to say about it is that they are happy birds, even if they can't sow, and scrape and trim. Farmer Morrison's example, in several things, is worthy of imitation, but especially in music and the renovation of old orchards; go, therefore, and see him, and profit by the lessons he cheerfully gives.

Profits of Sheep and Wool Growing.—Having read articles concerning the profits of farming, I venture the income of a flock of 24 sheep kept by one of my neighbors the past year, which was the round sum of $74,25, besides 6 lambs that died. He sold his wool at 38 cents per pound, and his lambs at $2,00 each, with one exception, that for $1,50. They are of a coarsish grade, but not native. I have bought 19 of the above sheep, at $2,25 per head, and will give the income of them the present year, when I sell my wool and lambs. —*Granite Farmer.*

New Sugar Plant.—Representations have been made by a cultivator in the Rhine Provinces, that he has in his garden a bulbous plant, called the "Russian Potato," four or five feet in height, and yielding a third more sugar than the beet-root. It is of an inestimable value to a region unfavorable to the growth of the beet, and it is afforded at a much cheaper rate.—*English paper.*

☞ The social feelings have not been unaptly compared to a dark heap of embers, which, when separated, soon languish, darken, and expire; but placed together, they glow with a ruddy and intense heat.



PEAR-SHAPED QUINCE.

We give a beautiful illustration of this variety of the quince, not because we think it the best kind, but to give in our list of fruits all the leading kinds, so that the cultivator may make his selection among them all. Mr. Downing says "the pear-shaped quince is larger and of finer texture than the apple-shaped. It is rather tough when stewed or cooked, the flesh is less lively in color, and it is therefore much less esteemed than the apple-shaped variety. The fruit is of medium size, oblong, tapering to the stalk, and shaped much like a pear. The skin is yellow. The leaves are oblong ovate. It ripens about a fortnight later, and may be preserved in a raw state considerably longer."

We think quinces make a much better preserve by being kept sometime before using them. We have kept them three months in a damp cellar before preserving, and then found them rich, tender and delicious.

As the quince is only used as a dessert fruit, we would not recommend its very extensive cultivation. There is no such danger with the *apple*, as Massachusetts produces scarcely enough for home consumption yet.

FEEDING CATTLE.

We have taken considerable pains to learn the opinions of men of experience as to how many times and at what hours, cattle which are tied up in the barn should be fed. Working oxen we do not include, because they will scarcely find opportunity to get more than three meals each day. The opinions gathered from the inquiries made, are almost as various as the persons questioned. There are some who have no system whatever; they feed whenever it is convenient; when they happen to be at the barn, or to have *their boots on*. Others, having the barn adjoining the wood-house, and quite handy, "*run out every once in a while and shake up a little*," while others "throw down a good stout foddering and let them grind away upon it."

Now it seems to us that neither of these practices is right—that frequent and promiscuous feedings keep the cattle uneasy, disturb the process of digestion, and is not so well as a more system atic course.

If cows are fed with hay immediately after being milked in the morning, having it placed before them a little at a time so as to occupy them in eating about two hours, they will be able to fill

themselves, and with a supply of pure water, will be satisfied so as to lie down quietly and chew the cud or sleep. If cut feed is given them a less time will be required for them to eat what they will take with a good appetite.

Now if, after taking this course with the cow, she finds all her wants satisfied and is lying in that delectable state, half sleeping and half waking, the digestive mill in quiet operation, and every function in full and healthy action, suppose you step in and shake up a lock of sweet hay, what is the effect? The animal rouses up, tempted by the appearance and flavor of the sweet morsel, and with a cloyed appetite picks daintily upon fodder which she would eat voraciously in the morning. How *much* the digestive process is disturbed by this we are unable to say; but that it gets the animal into an uneasy, expectant habit, there can be no doubt. Judging from our own feelings, however, occasioned by frequent eating, we should have no hesitation in believing that the process of digestion is considerably retarded and rendered unfavorable for the best health of the cow.

We have always supposed that it is not so much the *large amount* that is eaten that produces milk, fat and muscle plentifully, as it is the amount that is *properly digested* and *thoroughly assimilated* for the purposes desired, as flesh, chyle, blood, &c. A certain time is required to chew the cud, as the digestive organs cannot act without this natural process—if the cud is lost, the animal soon becomes sick. Liebig says that rumination (chewing the cud) has plainly for one object a renewed and repeated introduction of oxygen, for a more minute mechanical division of the food only shortens the time required for solution. A man in a surfeit will scarcely find much benefit from the *quantity* with which he has gorged himself, though it may be of the most nutritious character. Like the mill-stones too freely fed from the hopper, they become clogged, and finally refuse to grind at all.

Cattle turned to pasture where the crop is plenty, usually feed briskly for a couple of hours in the morning, and then lie down for several hours. About noon they will feed a short time and rest again until four or five o'clock, when they feed steadily until taken to the barn.

Will it not be well, then, to reduce attention to our cattle to a system, and ascertain whether we cannot get as much flesh or milk as we now do from a much smaller quantity of food? If so, that surplus will enable us to keep more stock and thus increase our profits.

The Working Farmer.—This paper is now published by Fred. McCready, Esq., at the rooms of the American Institute, 351 Broadway, N. Y. It is about enough for us to say that it is conducted, as heretofore, by Professor James J. Mapes, a gentleman perhaps better qualified to conduct an agricultural journal than any other person in our knowledge. We like it all but one thing—its form. Give us your agricultural works, friends, in the royal octavo form. No one has shelves for quartos or folios.

For the New England Farmer.

HONEY BEES.

Mr. Editor:—I noticed in your last number of Feb. 14th, an inquiry as to the cause of the destruction of bees in winter when they have plenty of honey in their hives.

I would like to ask your subscriber, if in those hives which he has seen, the bees were not clustered where there was no honey in the comb? I have not the least doubt they were; then the reason is plain. They died from the long continued spell of cold weather; for had they changed their position in the extreme cold weather, it would have been death; so rather than to break their cluster and let in a chill that would be death to them, they remain and die when honey is almost within their reach. I have noticed many so, and have no doubt that is the cause of their destruction—it is the *long continued cold weather* that destroys them. Some times they die for want of numbers to keep up a proper warmth in the hive; then the anchor frost proves destructive. Bees should be watched close in so *steady* a cold winter as this has been, and if you find a swarm that does not answer to the call, carry them in to a good warm fire and warm them up, and let them change their position, and then return them to their place. To have bees winter well, put your swarms into hives of medium size, and a good swarm in that shape is more likely to winter than otherwise.

Yours respectfully, S. H. Stockwell.

Sutton, Feb. 16, 1852.

SKILL IN FARMING.

The farmer has quite as much need of skill and tact in cultivating the earth, as any other class of citizens. Skill, tact, good management, contribute quite as much to success in farmers as hard work. The head must work as well as the hands, and be mutual helpers. In the article of butter, for instance, the same outlay is required to make a miserable poor article as a good one. But rancid butter will not sell in market for half as much as that which is pure, and sweet, and skilfully put up in yellow balls, and in clean, wholesome firkins. It is the skilful dairyman that pockets the most cash and establishes a good reputation for himself and his butter. Just so is it in all the various departments of agriculture. The man who cultivates his mind, and lays up a fund of useful and scientific knowledge, as he cultivates his farm from year to year, is sure to reap a rich reward in the time of harvest.—*Vermont State Journal.*

Parsnips for Swine.—In the Isle of Guernsey, the raising of parsnips for swine is a leading branch of farming. The root is almost exclusively used for pork making. A gentleman who once resided there, noticing the peculiarly fine flavor of the pork, inquired the reason of it, and was informed that it was owing to the hogs being fattened on raw parsnips. The pork, he says, was beautifully white, sweet, juicy and firm.

For the New England Farmer.

INTELLECTUAL AND RURAL DELIGHTS.

Messrs. Editors:—I have for some time past perused your paper with much interest, and I must say that I deem it the best paper with which I am acquainted for the farmer and his family.

But it was not so much to eulogize your labors that I commenced this brief epistle, as to write out a few thoughts on the agricultural profession, and to give you some brief details of my experience in practical farming. Of course it would be superfluous to attempt to instruct—my object being to gain information—as I am merely a *juvenis*, having just been admitted to the privileges of the *toga virilis*.

I have, during nearly all of my short life, resided on a farm; and since I have arrived at sufficient age and strength, I have been employed a great part of my time in the practical business of farming; but as I have long made it my rule to be almost always engaged in something useful, not wasting my time in idleness or in unprofitable sports, I have been able to read and study to a considerable extent. Indeed, I have employed a large part of the winters, rainy days and a small portion of nearly every day, in acquiring knowledge.

Thus it may be inferred that as I have been engaged pretty extensively in both corporeal and intellectual pursuits, so I am able to judge in regard to the pleasure produced from each occupation. I speak of this because it is a favorite assertion with yourselves, as well as your correspondents, that there is no other pursuit or business productive of an equal amount of real pleasure as practical farming and gardening. Now I respectfully dissent from this opinion as regards my humble self; for I can truly affirm that while farming has very few enticements for me, intellectual pursuits afford me the greatest delight. And, indeed, for my part, I cannot really see how it can be otherwise with any one who has been engaged in both employments, and who has a true conception of the almost infinite value of intellectual culture.

I certainly would like to know in what the secret consists of finding any real substantial pleasure while engaged in the monotonous business of holding the plow from "early in the morning to late in the evening;" or in continually "digging in the dirt," propping up corn and exterminating tares; or the somewhat less monotonous and filthy, but more wearisome labor, of haying; or in fact, in any of the manual operations appertaining to the farm.

But who can fail to derive enjoyment while perusing the works of the greatest and noblest minds; while studying the character and mode of thought and action of men of genius and wisdom; in fine, while engaged in any of those literary or scientific pursuits which seem to expand the mind and make one a *man*, in the true sense of the term?

The one pursuit is almost entirely sublunary, providing merely for the terrestrial wants of man, while the other is heavenly, *divine*—not only calculated to make one wiser and better, and enjoy those pleasures which he would otherwise be unable to attain in *time*, but also "when time shall be no more" and eternity shall roll on in its everlasting revolutions.

Fearing your patience will be exhausted with too long a communication, I will postpone my remarks which I intended to make in the present letter on my experience in farming, as well as some inquiries on a subject in which I am much interested.

Northfield, N. H., Jan., 1852. Antony.

REMARKS BY F. HOLBROOK.

To Antony:—

Your communication to the *New England Farmer* has been sent to me by my friend Brown, with a request from him that I answer it, which I comply with cheerfully, addressing myself directly to you.

I infer from your remarks that you have just entered upon the career of manhood, and that too, propitiously, with a taste for reading and a desire for the acquisition of knowledge. I trust you are apprised of the importance of a judicious selection of books to be read, books that expand, elevate, and refine, rather than simply divert, or amuse, the mind; and that so selected, you read them carefully, thoroughly sifting them by your own deliberate reflections. A *few* well-selected books, thus read, will prove of more solid advantage to you, than a whole library, read in a desultory manner.

But to be "a man, in the true sense of the term," as you style it, something more is necessary than even the proper reading of the best books; one must not only be extensively acquainted with other men's thoughts, but must also have the power of originating ideas himself—must be a deep *original* thinker, as well as a general reader. One may be a walking encyclopædia of other men's thoughts, may be able to tell something about almost all kinds of knowledge, and yet be quite deficient in power to originate noble thoughts, and to turn knowledge to useful practical account. If you would be a strong man mentally, then, in addition to your reading, invigorate your mind by draughts from the great fountain-head, by a close and profound study of nature. The poet tells us that—

> "Books are not seldom talismans and spells,
> By which the magic art of shrewder wits
> Holds an unthinking multitude enthralled;"

but that "nature deceives no student;" that here, the eye, the ear, the touch,

> "May give a useful lesson to the head,
> And learning wiser grow without his books."

There are no pleasures, in the acquisition of knowledge, superior to those we enjoy while studying nature. Her endless variety and beauty of animal and vegetable life; the wonderful principle of life, so variously organized; the landscape of mountain and valley, of lake and river; the phenomena of storms and tempests, which science is now illustrating, and reducing to exact laws;—indeed, every thing, above, beneath, and around us, is full of pleasurable instruction. There are the changing seasons, in all their sublimity and beauty, a contemplation of which is full of delightful instruction, of deeply useful lessons, to both head and heart; and which has called from the pen of Washington Irving one of the finest passages I have anywhere seen. Speaking of the vicissitudes of our American seasons, he says:—"If they annoy us occasionally by changes from hot to cold, from wet to dry, they give us one of the most beautiful climates in the world. They give us the brilliant sunshines of the south of Europe, with the fresh verdure of the north. They float our skies with gorgeous tints of fleecy whiteness, and send down cooling showers to refresh the panting earth and keep it

green. Our seasons are all poetical; the phenomena of our heavens are full of sublimity and beauty. Winter with us has none of its proverbial gloom. It may have its howling winds, and chilling frosts, and whirling snow-storms; but it has also its long intervals of cloudless sunshine, when the snow-clad earth gives redoubled brightness to the day; when at night the stars beam with intensest lustre, or the moon floods the whole landscape with her most limpid radiance; and then the joyous outbreak of our spring, bursting at once into leaf and blossom, redundant with vegetation, and vociferous with life!—and the splendors of our summer—its morning voluptuousness and evening glory—its airy palaces of sun-gilt clouds, piled up in a deep azure sky; and its gusts of tempest of almost tropical grandeur, when the forked lightning and the bellowing thunder volley from the battlements of heaven and shake the sultry atmosphere—and the sublime melancholy of our autumn, magnificent in its decay, withering down the pomp and pride of a woodland country, yet reflecting back from its yellow forests the golden serenity of the sky. Surely we may say that in our climate 'the heavens declare the glory of God, and the firmament showeth his handiwork; day unto day uttereth speech, and night unto night showeth knowledge.'"

You say, "it is a favorite assertion with the editors and correspondents of the *New England Farmer*, that there is no other pursuit or business productive of an equal amount of pleasure with practical farming and gardening." The assertion may have been often made, though I do not this moment recollect by whom made; it is not an assertion of mine. However, Socrates said, "Agriculture is an employment the most worthy the application of man, the most ancient, and the most suitable to his nature; it is the common nurse of all persons, in every age and condition of life; it is the source of health, strength, plenty and riches, and of a thousand sober delights and honest pleasures; it is the mistress and school of sobriety, temperance, justice, religion, and, in short, of all virtues." This is a high encomium; and, in general terms, is pretty true. If the condition, all things considered, of a class of persons engaged in any one of the leading practical persuits of man be compared with that of an equal number, of like intelligence, engaged in farming, the result will be likely to prove favorable to the latter class. Individual comparisons may result quite differently from general ones; for every man is not best fitted by taste and talent for farming, any more than every man is best fitted for preaching. The truth is, the world is wide, every variety of taste and talent is wanted to carry forward civilization, and may find an appropriate sphere of action; and the great point is, for each individual to ascertain his proper place, his own peculiar thing to do; and then if he does that thing, with an energy and decision of purpose which leaps over the obstacles it cannot cast out of the way, he will be apt to succeed, may be useful to others, and will probably enjoy life, so far as enjoyment is granted in this state of being.

To a mind capable of appreciating, as you term it, "the almost infinite value of intellectual culture," greater delight is undoubtedly found in its pursuit than in the *mere* execution of the manual operations pertaining to any of the practical callings by which man earns bread. But it is the inevitable lot of us mortals to gain our bread by "the sweat of the brow." As a general thing, we cannot give ourselves up to the improvement of the mind, but must engage the greater part of our time in hard matter-of-fact labor, only catching the passing hour, as it were, for pure intellectual pleasures and improvements. There are of course a few enviable exceptions to this the general lot, seen in the case of individual men, who, by a peculiarly favorable profession in life, or otherwise, are permitted to luxuriate in purely mental pursuits and pleasures; and there are other exceptions, not enviable, of persons who, for want of a necessity laid upon them of exertion, labor hard to kill time and keep off ennui—of persons who, sweating not in the earning of bread, are made to sweat most tremendously in digesting it. Our nature here is compound, of matter and spirit, and the two must be harmonized as well as may be. In general, if we attend too exclusively to the culture of the mind, giving ourselves up to its cravings under such circumstances, the physical nature will be neglected and enfeebled, which will ultimately clog the workings of the mind, and prevent it from attaining to those useful results it might otherwise reach in connection with a vigorous physical frame,—and so too, if we give ourselves exclusively to mere manual employments, we develope but little mind, and make no advancement worthy of a being gifted with the sublime faculties of intellect; and hence we may perhaps account for your affirmation, "that while farming has very few enticements for me, intellectual pursuits afford me the greatest delight;" you, with your reading of other men's thoughts, wonder what pleasure can be derived from prosecuting the methods of agriculture; a mere laborer, wonders what pleasure or profit it can be to you to pore over those books: a man employed in pitching over a manure-heap, with a soul but little elevated above a manure-heap, thinks only of the manure-heap, and of getting to the end of it; while a philosopher, taking this laborer's tools and doing his work, thinks of a hundred scientific principles, all suggested by the manure-heap and the act of pitching it over. If we have the mind to read them, there are deep useful lessons in almost every employment of head or hand, however menial the employment may at first seem; and never was there truer saying than that of the poet:—

> "It is the soul that sees; the outward eyes
> Present the object, but the mind descries;
> And thence delight, disgust, or cool indifference rise."

The true idea, then, generally, is to combine intellectual with manual pursuits. That such a course will tend to make a *full* man, a man practically useful, is sufficiently proved by history.—Look at the splendid galaxy of self-made men, who, in addition to carrying forward some practical calling, have risen to the highest eminence, have become intellectual giants,—men who, with freedom from the attenuating physical tendencies of a too exclusively closet-life, have, by their original, elevated, manly and practical mode of thinking, enriched the world by contributions to every department of knowledge. Of the various principal practical callings by which men earn bread, none is more favorable to intellectual culture than agriculture,—as I shall presently attempt to show. The professional man, combining somewhat the culti-

vation of the ground with his other pursuit, will be the stronger man for it, and may ultimately attain quite as desirable a condition as if he had exclusively devoted mind and body to his profession. The farmer who attends to the cultivation of his mind, in connection with that of his soil, is much better fitted to farm it properly and profitably, than if he were merely a manual digger.

I come now to a direct practical answer to your question—"In what does the secret consist of finding any real substantial pleasure in the operations of farming?" Among other things you name "the monotonous business of holding the plow from early in the morning to late in the evening." As too commonly conducted, I grant that plowing is not a particularly agreeable business, and that you have described it quite tersely. Too many plowmen, having little or no thought about the true philosophical principles of their business, are more anxious to get over the greatest possible breadth of land in a day, than to do proper and the best work. They cut their furrows too shallow, and as wide as, or wider than the plow can possibly turn them, and what portion can not be got over with the plow aided by the foot of the plowman, rolls back into its bed again, and the next time round its "grass side up" is put out of sight by the "cut and cover" operation, making a high ridge of earth with a deep hole beside it. The furrows are also very crookedly cut, and therefore do not match together at all well. The plowman twists and turns himself in all manner of shapes, is vexed with his plow, scolds at and whips his team furiously, labors and tugs and sweats away, "from early in the morning to late in the evening," and can show you as big and as mean a day's work as you could wish to see, with hardly a rod square of passably good work in the whole piece. I would not allow such a workman to plow a day for me, if he would do the work for nothing, and pay ten dollars for the privilege. But if properly conducted, say for ten hours in a day, which is all a merciful man will require of his animals of draught, however he may be disposed as to himself, plowing is one of the finest and most exhilarating employments in all the world.

Did you ever investigate the accurate philosophy of the plow and of plowing? Take a highly improved modern plow and study it. Look at it as a whole implement, and at its several parts, and reflect what a world of profound study it has cost to produce that same implement. What high mechanical principles it involves, and how beautifully do they combine together to produce an exact and most valuable result. There is the mouldboard alone, although an exact mathematical combination, yet it is a problem for you, (I speak advisedly,) which, if you have not solved it, its solution will give you a pretty sharp brush, with all your mathematics. Then too a combination of mathematics, a little varied to suit each case, will give you the best form of mouldboard for sandy and gravelly soils, for clay, and heavy moist soils generally, and for best working stubble land. The plow best adapted to sandy, and generally light, dry soils, will lay flat furrows, accurately shut in beside each other, thus preventing a too great natural tendency to evaporation, incident to such soils. Your mathematics will show you that a coulter set bevelling to the land, an inclined landside to the plow, and a concave-lined mouldboard, all contribute to facilitate the laying of flat furrows, and that it would be difficult to drop the edges down accurately beside each other without these several provisions. The plow best adapted to clay and other heavy or moist soils, cuts rectangular furrows and lays them at an inclination of 45° to the horizon. Your mathematics will show you that this is the best position for the furrows of such soils to be placed in. It can be undeniably demonstrated that none but rectangular furrows, whose depth is to their width as two is to three, *can be laid at an inclination of* 45°; that rectangular furrows, whose depth is equal to two-thirds their width, and which are laid at an inclination of 45°, present, in their projecting angles, a greater surface of soil to the ameliorating influences of the atmosphere, and greater cubical contents of soil for the harrow to operate on in raising a deep fine tilth, or seed-bed, and permit underneath them a freer circulation of air, and passage from the surface of superfluous moisture, than furrows of any other form or proportions that are practicable to be turned. The plow in the very best manner adapted to the working of stubble lands, will be higher in the beam to enable it to pass obstructions, and shorter in the turn of its mouldboard, than either of the preceding, will have a greater depth of iron in the back parts of the mouldboard, which will tend to throw its loose stubble furrow all over to an inverted position, and leave a perfectly clean channel behind it for the reception of the next furrow. Thus you see there is quite a philosophy in plows and in plowing,—which the intellectual farmer is bound to understand.

However dull and monotonous the business of plowing may be to you, it is not at all so to me. Starting my team a-field of a bright spring's morning, with my plow all bright and clean from its winter quarters, I feel as honest a pride and pleasure at the thought of my occupation as I ever do when engaging in any employment. I strike out my lands with a furrow as straight as an air line. After this is accomplished, I guage my plow to cut deep furrows, and as narrow as is possibly compatible with the depth, and then take them off the land of uniformly exact depth and width, never allowing a crooked furrow to be seen in my plowing. To me it is very exhilarating to see the furrows roll off my polished mouldboard, and lay beside each other with as accurate a finish as though they had been jointed by a carpenter's tools, and to think, as my eye surveys the smoking soil thus prepared, how mother earth always delights in bountifully rewarding the careful husbandman,—that she invites a liberal, intelligent and accurate cultivation, by returning as compensation a greatly increased crop. I say to myself that I am one of the number engaged in an operation without which man would not have bread, civilization could not advance or be sustained, and which was one of the fundamental operations early contributing to elevate man from the barbarous state, and fix him in the abodes of civilization. I remember that the plow has been regarded with a sort of sacredness by men in every age, that even far back—

> "In ancient times, the sacred plow employed
> The kings, and awful fathers of mankind;"

and that now, it employs many of earth's choicest spirits. This occupation brings me fine health,

refreshing slumbers, and while engaged in it, I can *think* as accurately as under any other conditions whatever. Indeed, if I were called upon to prepare a public address, an article for the press, or to engage in any other intellectual exercise, I could fix upon and arrange my subject, and bring to it quite as much vigor of thought and shape it into as logical an arrangement, as under any other circumstances.

My friend, you will find more or less philosophy connected with the proper performance of almost any of the methods of agriculture; and that many subjects, requiring further scientific inquiry, exist in even the commonest operations of husbandry. Your soils need to be fully understood, that you may supply their wants and correct their superfluities. The various ingredients or properties of your manures must be known, together with the theory of composting, and must be applied properly. The properties that go to make up your crops must be found out, so that you may best adapt the crops to the soil, or if your soil is deficient in ingredients requisite to the raising of some desirable crop, they must be supplied by proper manures and cultivation. Fruits, for home-use and for sale, must be produced, and a world of scientific investigation may be well employed, in finding out their best management, the character and habits of insects injurious to them, and the best means of preventing their depredations. The wet lands must be properly drained, which requires a combination of science with practice. Irrigation produces wonderful effects, may perhaps be within your reach, and its theory and best management must be found out. The philosophy of breeding domestic animals, a beautiful and interesting study, generally poorly understood and miserably practiced in our country, must be investigated.

So I might go on, enumerating a great variety of subjects, or entering into detail with those I have glanced at. But these now named are sufficient for illustration, and they show that an absolutely limitless field of inquiry, involving the principles of several sciences, is opened to the farmer, in the prosecution of his daily business. It is his high privilege, in the very act of earning his bread, to come into intimate contact with the wonderful operations of nature. If he be a man fond of intellectual inquiry and improvement, he will be convinced at every step in his pursuits, that to be "a workman that needeth not to be ashamed" of his farming, he must keep his mind all awake and in action, and by observation and study must endeavor to understand nature. The more his mind rises to a perception of the works of Deity, the more will it be filled with astonishment and delight at their minuteness and comprehensiveness, their beauty and grandeur, and so far as he can follow them, the exact laws which regulate and control all animate and inanimate nature. In proportion as he closely investigates, so will he perceive that the meanest of those works is inexhaustible; and therefore I say, show me a man of such high endowments of mind, or such scientific attainments, that his every energy may not find full employment in unravelling nature as connected with practical agriculture, and will not, after all his efforts, be constrained to admit that there are yet unexplored regions beyond his researches, and I will show you a man, the equal of whom does not exist; and I further say, that farming is not necessarily that merely "sublunary pursuit, providing only for the terrestrial wants of man," which you suppose it to be; but on the contrary, properly understood and conducted, it combines as much of the practical and scientific, has legitimately connected with it as much of the poetical and sublime, is as dignified in itself, and as elevating to the mind of man, as any other pursuit; and leading us directly to a perusal of the works of Deity, as written on his ample page of nature, we may emphatically gain that knowledge, fresh from the fountain-head, which is "not only calculated to make us wiser and better, and to fit us to enjoy pleasures which we would otherwise be unable to attain in time, but also when time shall be no more."

I have been thus earnest in stating the case as I understand it, because our agriculture has been quite long enough cursed with a prevailing sentiment that the farmer does not need much knowledge, and could not use it practically and profitably if he had it. It is claimed by many that the principles of correct cultivation are few, and all found out; that farming is a mere monotonous routine, for physical labor to conduct; that he is the best farmer who can do the biggest day's work with his hands, who can skin his farm the cleanest and put the proceeds of its fertility at interest, spending little or nothing for the improvement of himself and family, and nothing to make home attractive.

Talk to many of our people of the advantages of applying the sciences to the cultivation of the ground, and about better educating the farmer, and they will tell you that it is simply ridiculous nonsense. I say that these things are a curse to agriculture every way; and particularly so because many of our brightest and most enterprising young men, sickening at the thought of engaging in a pursuit thus advocated and practiced, and unwilling

> "To drudge through weary life without the aid
> Of intellectual implements and tools,"

go off to other pursuits, when, if they could have had one-half the thorough training to fit them for farming which they were obliged to go through to be prepared for some other pursuit, we should now see much more of correct, profitable cultivation than is seen.

I have to say to you, in conclusion, my young friend, that if you wish for a field of honorable usefulness second to no other, for a naturally dignified pursuit, where cultivated intellect may find full scope, where by a practically judicious application of the natural sciences which illustrate agriculture you may wield a large influence for good to others, then stick to your farming. True, it will not bring you great wealth; that is with difficulty attained, by comparatively a few; it usually requires of him who seeks it the devotion of his every energy, while it is not his greatest good, but but sometimes proves an evil, either to himself or children. But an enlightened cultivation of the earth will give you a competence, and will prove favorable to mental culture and virtue. Your home, though modest and unexpensive, may be adorned in many little ways which will tend to make it the tasteful and fitting abode of virtue. A moderate outlay will, in these days of improvement, furnish you an assortment of the very best books, so that seated before your hearth you may

commune with the choicest thoughts of gifted men. While abroad in the fields, nature will give you lessons of the deepest import. Your lands will furnish you a laboratory for the testing and practical application of science. These things are within your reach—not like wealth, difficult, and hard to be won, and only by a few,—they are

"No special boon
For high and not for low, for proudly graced
And not for meek of heart. The smoke ascends
To heaven as lightly from the cottage hearth,
As from the haughty palace. He whose soul
Ponders this true equality, *may walk*
The fields of earth with gratitude and hope."

Brattleboro', Feb. 24, 1852. F. Holbrook.

A NEW DEPREDATOR.

Walking near the woods in December last, we noticed a small flock of birds flying among the bushes and apparently feeding upon their buds. Flitting from bush to bush they presented a beautiful appearance as the sun glanced upon their bright feathers. Having no gun we were not able to obtain a specimen, and saw nothing more of them until within a few days, when they approached near our dwelling and were found feeding on the apple tree buds. A flock of about a dozen visited some large trees that stood near each other, and in the course of two or three days the snow was covered with mutilated buds as though chaff had been sown upon it. On examination we found the blossom buds cut open smoothly on one side, the centre taken out and the hull or outside dropt upon the snow. One of the birds was then shot and proved to be the female *Pine Grosbeak*. It is nearly as large as the robin, has stout, short beak, is generally an ash-color with dull yellow on the back. The color of the male is purple breast and back, and he is somewhat longer than the female.

These birds occasionally visit us, we understand, from higher latitudes, and have been seen in unusual numbers this winter. Is it because the weather has been so extremely cold, that they have found it congenial to their habits? Perhaps we have too hastily pronounced them "depredators." We may not know all their business here. At any rate, they are welcome to a breakfast from our trees, be it bugs or buds, as some compensation for their delightful company in these stern winter days.

Western Reserve Farmer and Dairyman.—This is the title of a new periodical, devoted as its name indicates, and published at Jefferson, Ohio, by G. B. Miller. R. M. Walker and N. E. French, Editors. It is printed in book form, on handsome type, and is filled with well-written editorials and judicious selections. We have selected its article on the "proper time for felling timber" for our own columns. There is plenty of room, fellow-laborers—go on with stout hearts.

☞ We would call attention to the article upon the "Races and Varieties of Animals," which has been kindly furnished by Lemuel Shattuck, Esq., author of the *History of Concord*, and a gentleman of fine literary taste and acquirements. We hope to be favored occasionally with the productions of his pen.

For the New England Farmer.

THE HISTORY OF THE APPLE TREE.

BY S. P. FOWLER.

[continued.]

The canker worm has appeared at intervals, in the eastern part of Massachusetts, during a period of one hundred years. It is peculiar to this country, and differs from the Winter Moth of Europe, described in Kollar's Treatise. Some writers upon the cultivation of fruit trees, when describing the canker worm, have made great mistakes. The author of the *Fruit Culturist*, published in New York, has copied the Baron Kollar's female figure of the European Winter Moth erroneously for our canker worm grub. Thus giving our female wings, which, very fortunately for the cultivator, it does not possess. We have never yet seen a better way of destroying this vermin, than by the old method of tarring the trees. To prevent the ascending of the female, we have been in the practice, when trimming our trees in the autumn or winter, or perhaps early in the spring, to place the limbs taken off, around the trunk of the tree. By so doing, in many cases, they will ascend these prostrate branches to deposit their eggs, instead of the tree. Care should be taken to remove these branches to the brush heap, before the worms are hatched.

The insect called the autumnal caterpillar, that feeds on the leaves of the apple, pear, elm and other trees, has become very numerous of late years. They live in small colonies, and at their first appearance do not attract much notice. But as they increase in size, they commence their ravages and inclose the leaves, branches and fruit, on which they feed, with their web, rendering themselves conspicuous and unsightly, to the most careless observer. To the careful and observing cultivator, they can easily be destroyed, when they first appear, the whole swarm being found on one or more leaves. I am of the opinion, as these insects appear late, the trees do not suffer so much from the loss of their leaves, as they do earlier in the season from the ravages of the tent or lackey caterpillar.

The Woolly Aphis, or American Blight, is now attracting the attention of the cultivators of the apple tree in this country. Doct. Harris says, this insect had been noticed in England as early as the year 1787, and has since acquired there the name of American blight, from the erroneous supposition that it had been imported from this country. With us this insect, or something like it, has made its appearance where there was a flow of sap, caused by the amputation of limbs in summer pruning; also under grafting clay, they have been noticed in great numbers, sucking up the sap flowing from the wounded stump, to the great detriment of the growth of the grafts. We discovered last season the Woolly Aphis in great numbers, upon the branches of a purple beech, which were effectually destroyed by the application of a solution of whale oil soap. Plant lice of every kind can usually be destroyed in this manner. The

apple tree is subject to few diseases, when under proper care and cultivation. In fact, but few kinds of trees will continue to live and bear fruit when suffering from long and continued neglect so well as the apple tree. The canker is a disease, says Forsyth, incident to trees, which occasions the bark to grow rough and scabby, and turns the wood affected to a rusty brown color. The appearance of this disease, we have more particularly observed upon the pear, than upon the apple tree. To the neglect of pruning at a suitable season, and in a proper manner, may be ascribed the most usual form of canker, which frequently commences from the badly amputated limb. Our method has been in arresting this disease, to cut out all the dead or discolored bark, and apply to the wound a thick paint made from red or yellow ochre, with a brush. We prefer this paint for reasons, which we shall give in our remarks upon pruning, to Mr. Downing's composition of alcohol and gum shellac, or that used by Mr. Forsyth. The last named gentleman, in his time, made a composition, which was used by him in curing diseases, defects and injuries in all kinds of fruit and forest trees. This was compounded with great care, labor and inconvenience, and was supposed to possess great efficacy, as a medicament, when applied to a diseased tree. But this notion was exploded, if we remember right, by an English cultivator, Mr. Knight, some years ago.

Since the cultivation of the apple for the manufacture of cider has in a good measure ceased to be an object with the farmer, his attention has been given to the culture of superior kinds of fruit for the market. These cultivators having more or less of those old cider apple trees on their farms, the question is frequently asked by them, what can I do to renovate these trees, and make them produce good fruit? Will grafting them answer a good purpose, and will scions do well in these old limbs? In answer we would say, as a general rule, it is labor lost to graft these old tops. As the whole subject of the restoration of old fruit trees, whether decayed or not, together with that of pruning, is one of considerable importance, and will necessarily exceed my limits in this communication, I shall defer its further consideration to a future article. S. P. F.

Danvers, Feb. 19th, 1852.

LICE ON APPLE TREES.

A friend from Pittston has sent to our office a branch of an apple tree all encrusted over with little greenish scales that look like minute muscle shells.

They are not uncommon to young apple trees, but are a serious trouble, and very injurious to their growth. They are formed by a little fly, which lays an egg or two on the branch and then covers them over by this scale which protects them from the weather. Here they lie until hatched by the warmth of spring, when the worm perforates them and creeps out. If examined by a glass of moderately magnifying power, they can be clearly seen.

A good method to prevent and destroy these, is to make a lather of whale oil soap, or if that cannot be obtained, common soft soap of the kitchen will do. Take it in the hand and rub it on. It is said a wash of quassia wood steeped in water, will destroy them. A lye made of a pound of potash to two gallons of water, and applied with a swab, is sometimes used—or a lye made of common wood ashes, not very strong, may be applied in the spring, before the leaves start.—*Maine Farmer.*

SEVENTH AGRICULTURAL MEETING,

At the State House, Feb. 24, 1852.

Subject for discussion—Grasses and Grain Crops.

Hon. Isaac Davis, of Worcester, presided at the meeting on Tuesday evening last. On taking the chair, after alluding to the dignity and honorable character of the occupation of the farmer, he said that the subjects for discussion—*Grasses and Grain Crops*—were very important,—the one furnishing daily food for animals and the other giving breadstuffs to the world. He who looks into these subjects and fully understands them, understands the great scientific part of agriculture. He is a learned man in agriculture. Such the speaker did not profess to be. But he would throw out a few intimations which might perhaps draw out from others more valuable information upon the subject. He said that grains, which with us are divided into a few classes, are generally cultivated with a better understanding than the grasses. The grains are not cultivated so well here as in the old countries, mainly for the reason that our lands are much cheaper. There, the farmer after preparing his ground for the seed goes over it with a roller cutting it into grooves. The seed is then cast in and the plants come up in rows and are weeded with as much care as we weed our onion beds. We sow our seed broadcast and the wheat and tares grow together, the latter absorbing no small portion of the nutriment of the soil. This will be the case until our land becomes more densely populated and more costly. To grasses we have given less attention than to grains. It is not necessary that the farmer should understand the great variety of grasses as the botanist does, and be able to classify them, but he should know those which contain the most nutriment for his animals, and their combinations, so that in laying down his lands, he may so intermix them as that a new kind of grass will come up every month. In the old country it is the practice to sow from four to ten kinds of seed, according to the length of time which the farmer wishes to feed from his land. This is the reason why more feed can be obtained from a certain number of acres there than here. Our pasturage here is not so good as there, because we do not go into an analysis to see what kinds of grasses will best combine to furnish the most nutriment. And why we do not do so, is owing in a great measure to the fact that our land is so plenty and so cheap. He believed the time to be at hand when our system in this respect will change, and that time will be when the proprietor of the soil and not the tenant is the cultivator.

On motion of Mr. HUBBARD, of Sunderland, it was voted that hereafter the speakers be limited to *ten minutes*.

Mr. HUBBARD then addressed the meeting upon the subject of wheat-growing. He said that notwithstanding the interest manifested on this subject some years since, and the encouragement of it by bounty from the State, a feeling seems now generally to prevail that wheat is among those products that cannot profitably be produced in Massachusetts. A short time since, at a meeting to organize an Agricultural Society in his county, the opinion prevailed that there was so little encouragement for the farmer to raise wheat, that it was not worth while to offer a premium for it. He believed that there is no difficulty in producing wheat in Massachusetts, and probably in every county in the State. There might be some doubt as to whether we could raise it so as to compete with the West. The same objection might be urged against the cultivation of Indian corn, and yet farmers in every part of the State cultivate corn. Why, then, should they not devote a portion of their land and their labor to the cultivation of wheat? He then proceeded to answer the question, can we raise wheat in Massachusetts, by giving certain facts which had come under his own observation. He said there were farmers in Franklin county who had raised wheat for twenty years, and they testify that they have no more difficulty in getting a good crop, than in getting a good crop of Indian corn. In the autumn of 1850, he plowed a piece of land from which, six weeks before, he had taken a crop of clover. He had mowed it for two years. The land, which was warm, dry, sandy loam, was not in a high state of cultivation—after plowing in the clover to the depth of 7 or 8 inches, he let it remain 8 or ten days and then harrowed it. He then sowed six bushels of ashes to the acre and 1½ of wheat. In the spring, he put on five bushels of air-slacked lime, and harrowed again in April, and he here observed that it is the custom there, to harrow grain lands in the spring. He cut it at the usual time, and the result, very liberally measured, was thirty bushels. The amount of land was a little less than an acre. A neighbor of his, on land to which neither lime or ashes were applied, but into which was plowed corn stubble, had raised from less than an acre, 37 bushels and 20 quarts of wheat. In several towns in that neighborhood, even better crops than this had been obtained. He came, therefore, to the conclusion, that wheat could be raised with profit in Massachusetts.

Mr. BARDWELL, of Hatfield, said he came from a town which probably raised more wheat than any other town in the State. The wheat crop had been steadily increasing for years, and last year it exceeded in his town 2500 bushels. The present year, if favorable, he thought it would be from three to four thousand bushels. The average yield is about 25 bushels to the acre. But a few go as low as 20 bushels to the acre. And he had known of one 4 acre lot producing at the rate of 38 bushels per acre. Farmers there follow either clover, broom corn or Indian corn, with wheat. It is, however, thought that it generally succeeds best after clover. It does well after corn, if the stalks are plowed in. He considered wheat a lucrative crop to raise. The straw will pay for two-thirds of the labor. The wheat is worth on an average, $1,25 per bushel. The soil is alluvial, and the wheat succeeds best on that which is clayey. Ashes are sown in the spring as a manure. He considered wheat as sure as any other crop.

Mr. POMEROY, of Hampshire, said the question whether we can raise wheat to advantage, seems to depend upon another question, which is, whether we have in our soil, or can afford to put into it, those ingredients of which wheat is made. He thought there was no special mystery about the matter. If the farmer raises a very large crop of straw and finds there is no wheat on it, what he wants to know is, how to make that straw produce wheat. And here is where science (which those who contend that *practice* is all that is needed, overlook,) comes in to analyze our soils, and ascertain what ingredients are wanted. We want an institution to teach this science—to give us this information. By Dr. LEE's report it appears that these substances are very simple—and we can raise wheat if we know how to supply them. Thirty bushels of wheat taken from one acre contain over 200 pounds of mineral substances, and this could not be long taken yearly from the land, without impoverishing it, unless it was in some way supplied. Upon two acres of land from which he had taken a crop of potatoes, he had put 40 oads of manure; 70 bushels of air-slacked lime, costing 6 1-4 cents a bushel; 2 bushels of salt, and sowed the Golden Australia wheat, a bushel-and-a-half to an acre. Having thus used the necessary means, he expected a crop in the time of harvest. He closed by alluding again to the necessity of science to teach the farmer how to supply the ingredients of his soil to adapt it to a particular crop.

Mr. BUCKMINSTER, of Framingham, made some remarks in regard to the wheat growing lands of the Scioto valley in Ohio, the richest in that region—and said that an analysis of them, had shown that they do not contain one per cent. of lime. In Massachusetts, we have on an average two per cent. of lime. According to this view, one bushel of lime to an acre, was sufficient to raise wheat. Lime would not do on his land. Where the land is infused with iron ore it will work, and no where else. He said lime is not a manure and will not enrich land.

Mr. HOWARD, of the *Cultivator*, said the soil in

Scioto valley was comparatively destitute of lime, and was not generally considered good wheat soil. It was chiefly remarkable as a good soil for corn. The best corn grounds are not good for wheat. The necessary amount of lime to be applied to wheat lands cannot be determined by any specific rule. The best wheat lands so far as ascertained, show never more than 2 per cent. of lime; and if it is true that one soil contains two per cent. of lime, he should have no hesitation in saying that wheat can be produced to advantage. In the great wheat soils in Russia, it had been ascertained that there is but little lime—and the same fact has been discovered in regard to the richest wheat growing section of New York—Seneca county.

Mr. BARDWELL, by way of explanation, said that farmers in his vicinity always soaked their wheat in a strong brine, and rolled it in air-slacked lime before sowing it.

Mr. HUBBARD defended the theory of applying lime to lands on which wheat is cultivated and gave instances where it had been done in Maryland with great effect.

Mr. PROCTOR, of Danvers, next spoke and changed the topic of consideration to that of the culture of hay, in which he said there was great room for improvement. He did not believe the average yield of mowing lands throughout the State would exceed one ton per acre, and thought it could be doubled by deep plowing and the application of such manures as can be found upon the farm. He mentioned the result of this course in the case of Mr. CLAPP, of Greenfield, who, from a lot of six acres increased his crop from 6 tons to 26 tons—[Mr. HUBBARD said that he understood Mr. CLAPP's statement to be, that from 7 acres he got 6 tons to the acre or about 42 tons in all.] This was done by the introduction of the subsoil plow and good manuring. Mr. PROCTOR also spoke in regard to improving pasture lands. It can be done either by carrying on plaster or by deep stirring. He had known crops on pasture lands to be doubled by simply setting out locust trees.

Mr. SPRAGUE, of Duxbury, gave his experience in raising corn. It was, he found, the most profitable crop he could raise on his land. The yield is from 40 to 80 bushels per acre. Forty cents a bushel, he thought would pay him for raising corn, as well as 75 cents for rye, or $1 for wheat. He did not believe lime was a manure. It did not benefit his land. The best grass in his vicinity is the "Burden grass." In cultivating his ground for hay, he applies his manure to the surface. With a top-dressing once in three years, there would be little difficulty in keeping grass lands in good order.

Mr. MOTLEY, of Dedham, produced some statistics showing that the hay of Massachusetts growth used in Boston, was not a fifth of the amount used. The rest comes from Maine and New Hampshire. He had sent to Maine to get some information in regard to the raising of hay there. The answer he got was—that the average yield is about 1½ ton per acre; expense of making, $2,50 per ton; screwing and hauling $2,75 per ton; the land is kept up eight or ten years and is considered worth $60 per acre. Other investigations had convinced him that the yield of hay had not diminished in Massachusetts as fast as in the other New England States. The only State in New England which leads us in the proceeds of the hay and dairy, is Vermont. He contended that Massachusetts is not going behindhand in her agricultural products.

For the New England Farmer.

TRANSPLANTING POTATOES.

MR. EDITOR:—My first experiment was in 1848, and was merely to ascertain whether the potato could be transplanted successfully or not. The result was, a couple of bushels of fine, nearly ripened potatoes, by the middle of July. The next year I prepared to plant the whole of my land in a similar manner. I planted the middle of March under glass, such as is used for forcing lettuce, and cucumbers. I also had a small glass grapery, which I used for the same purpose in addition to raising grapes. I removed about 3 inches of the top soil and placed the seed in it, as close as they would lie together and then replaced the soil; the middle of April the plants were about 3 inches high, and I now prepared to put them out into the garden, in the usual way of manuring in the hill; the plants can be taken out of the bed with a shovel, and by keeping them dry at this time, they easily separate. I now placed them in the hills on the manure, and at this time, as frosty nights are not over, I hilled the earth entirely over the plants. In 4 or 5 days, the plants were bursting through the top of the hill, which served for the first hoeing. The sprouting bed being now clear, I planted squash seed in it, and in May, transplanted them into the spaces between the rows of potatoes, at proper distances. About two-thirds of the land was thus set out with squash plants. In May, I also planted potatoes on my grape border, as before, for transplanting. These were the black, the others, the white Chenango, and when 5 or 6 inches high, transplanted them into the spaces between the rows, on the other part of the garden.

On the 3d of July, I commenced digging the first crop of potatoes, and hoeing the second at the same time. By the end of July, the ground was cleared of the first crop of potatoes, which I sold in Salem market at 2 dollars a bushel, and they were retailed as high as $4. The squash vines now had possession of the ground, from which I took in the fall a very large crop of squashes. And now comes the 2d crop of potatoes, which were fully equal to the first, in point of size and quantity, but affected with the rot, which the first escaped. Specimens of the two crops I sent to the Agricultural Exhibition at Salem, for which I obtained a premium. The next year, 1850, I prepared to experiment on a more extensive scale. I

cut and planted as before, six bushels of potatoes.

I transplanted into my garden the middle of April, as before. In May, I went between the rows of potatoes, and with a hoe made a small hole in which I planted corn at regular distances, without manure. The 3d of July, I commenced digging the potatoes and hoeing the corn at the same time. The potato vines, I put into the hole, as I took the potatoes out, which served as manure for the corn, which bore me a good crop, well ripened.

The result of this is, or seems to be, that two crops can be raised on the same ground the same season, and the potatoes secured against the rot, which takes the vines in August, which, if left until fall, would, I have every reason to believe, be sound, as they are so far advanced at the time the disease attacks them. Truly yours,

SAMUEL B. NICHOLS.

Wenham, Jan. 5, 1852.

For the New England Farmer.

ABOUT PIGS AND PIG-PENS.

BY SILAS BROWN.

MR. EDITOR:—Since potatoes have become too scarce to feed swine upon, there are but few people who can afford to winter over pigs for their next year's pork. An estimate of the expense of feeding pigs from the weaning in summer or fall to the next spring or summer, whether fed on grain or roots, in this section of the State, will amount to as much or more than we pay for drove pigs in the spring after being wintered. Since it has become a common practice to purchase of drovers, we have to take such stock as they have on hand, which are mostly bred in the Western States where the breeders of such stock are not very particular in selecting (if I am not mistaken) the best kind of animals to breed from. I have been in the practice of buying my pigs from droves for a number of years, but have seldom got one of a good breed; the most of them are coarse haired, thick skinned, long eared, long snouted, long legged, slabsided, and greedy-mawed sharks, better adapted for racers than making palatable pork. The same amount of food consumed by one of this every way long breed to fit him for the knife, given to a pig of a good breed and of an opposite description, will produce from 12 to 50 per cent. more pork, if I am not extremely wild in my "flights of fancy." I have not skill enough to designate and give names to the different varieties of the grunting fraternity, or to apply the titles to emigrants from different English counties, or to trace their pedigrees back to their bristly vociferous ancestors, and therefore, I shall acquiesce in submitting to the judgment of the stock breeder to select the Middlesex, Suffolk, or animals of any other description which will meet the approbation of the public.

I know of no animals among us so far in the rear of "good breeding" as our pigs from the West are. It would decidedly be a point of economy and a benefit to the swine breeder as well as the purchaser, to select the best and most approved animals for breeders. Every farmer or swine breeder by a little observation and care can improve his swine by crossing with the breeds which have the best marks and give the most credit for being fed well. If our western producers would improve their races of swine, and send us well built and handsome pigs, they would not only be gainers, but would confer a favor on the purchasers in New England. Their good likely pigs would be better worth *six* cents a pound, than those misshapen apologies for hogs would *three* which compose the most numerous part of the droves sent us. We, New Englanders, cannot compete with our western friends in swine breeding for market; at the West every kind of animal food and food for animals is produced in great abundance, and the rapid conveyance to market by steam, instead of the old tardy and expensive process of driving, will give the western farmers the privilege of supplying our markets at the North, if they see fit to improve and send us a better breed of swine.

While on the subject of pig breeding, I will suggest an improved plan of constructing a cheap platform to facilitate grunter's operations in making manure. About 20 years ago, I found my hogs had penetrated too deep in their pens by rooting up large quantities of gravel and sand unfit to make manure, and we floored over one pen with thick plank; the other, for the want of plank and flat stones, we paved with cobbles, in a similar manner to street paving. The pen paved has answered every purpose for a floor for the hogs to work upon at composting manure. The plank floor began to rot after a few years, and all decayed away years ago, while the paved pen continues good, the hogs not starting a cobblestone to the present time; and the pavement has improved, if any alteration has taken place, and become more compact and smooth. The planks used in one pen were worth 26 dollars a thousand; the pavement cost nothing but the labor of placing the stones; in this case the cheapest is best and best cheapest.

I have been of the opinion, for many years, that pigs are injured by driving to market; they do not thrive as well as those bred in the neighborhood; many of them are troubled with a bad cough. I purchased one that had a cough and did not thrive well, and on cutting him up, found several of his ribs had been broken; many of them have tubercles in their indurated livers, which will prevent a healthy action of the digestive organs and a rapid accumulation of fat. Hurrying or over-driving swine, (if not injured by blows,) will cause a rapid circulation of the blood, and consequently unnatural heat and fever, which hinders their growth and produces diseases of the liver and lights, and renders them of little value. It takes a long time for a "sick pig" to recover, after being heated by driving, by which the purchaser is the loser in the growth and keeping. S. B.

Wilmington, Dec. 15, 1851.

RECLAIMED LAND.

John Shipman, of Amherst, gives the results of his labors in reclaiming fifty acres of swamp land, in a report made by him to the Amherst Agricultural Society. This land, when commenced upon, more than twenty years since, was a regular peat swamp, and worth comparatively nothing. In 1849, forty acres of it produced 10,000 bushels of potatoes. At various times, eight acres of it have produced 600 bushels of corn; ten acres, 2,500 bushels of potatoes; broom corn at the rate of 600 pounds per acre; and last season, fifteen acres produced more than 1,700 pounds of tobacco per acre.

The present worth of the land is $6500—considered a low estimate; net profits, $4831.

REMARKS.—The above shows the effect of cultivation in a striking degree. So far as the latter crop is concerned, however, the land had infinitely better have remained in a "worthless peat swamp."

For the New England Farmer.

RACES AND VARIETIES OF ANIMALS.

MR. BROWN:—The Natural History and varieties of mankind have recently received an increasing attention. In a work on the subject, just published by Dr. William B. Carpenter, an eminent English physiologist, the author has referred to the statements in the subjoined paper to prove, that from the accidental or "spontaneous" production of a peculiar form or variety of animals, and, by analogy, of man, a new type or race may become permanent and be perpetuated. The article was communicated by Col. David Humphrey to the Philosophical Society of London, and published in their transactions for the year 1813. The importance attached to the statements by Dr. Carpenter and others—intelligent agriculturists as well as scientific men generally—induces me to ask the use of your valuable journal for its republication. In doing it, I desire to call the special attention of your readers and correspondents to some queries, having a general bearing, which the subject suggests:—

1. Are the statements given in the article founded on facts within the recollection of any one now living? and are there races of sheep of the form and description here given now existing in New England? and, if so, can they be traced to the Dover breed as their progenitors?

2. Are there any well authenticated facts existing to show that a *new* and *permanent* race or type of any domestic animals can be produced under circumstances similar to those here stated?

If any substantial facts and illustrations on this subject are known to any of your intelligent correspondents, they would subserve the progress of science, and promote the real interests of the agriculturist, by their publication. L. S.

Boston, Feb. 17, 1852.

Humphreysville, (in the State of Connecticut,) Nov. 1, 1811.

SIR:—I propose to give some account of a new variety in the breeds of sheep, which has lately sprung up in America.

Seth Wight, who possessed a small farm on the banks of Charles River, in the town of Dover and State of Massachusetts, about sixteen miles distant from Boston, kept a little flock composed of fifteen ewes and one ram. In the year 1791, one of the ewes produced a lamb of singular appearance. By the advice of some of his neighbors, he killed his former ram, and reserved the young one for breeding. The first season, two lambs only were yeaned in his likeness. In the following years, a number more, distinguished by the same peculiarities. Hence proceeded a strongly marked variety in this species of animals, before unknown to the world. It has been called by the name of the *Otter breed*.

This name was given from a real or imaginary resemblance to that animal, in the shortness of the legs and length of the back; by some supposed to have been caused by an unnatural intercourse; by others, perhaps as fancifully, from fright during gestation. It is only certain, that otters were then sometimes seen on the banks of this river. They have since disappeared.

The person, who was the first to dissect one of these sheep for the purpose of ascertaining the properties and qualities which distinguish them from our common breed, has added the appropriate term of ANCON.

The singularity of form seems to be comfirmed in the blood. Experiments, in crossing, have changed the strain, or, if I may be allowed so to express it, amalgamated the qualities of this with those of other breeds, so as to produce a mixed or mongrel race, in too few instances to form an exception to the theory.

When both parents are of the otter or ancon breed, the descendants inherit their peculiar appearance and proportions of form. I have heard of but one questionable case of a contrary nature.

The small number of cases where the young are said to partake in part, but not altogether, the characteristics of this breed, will not invalidate the general conclusions, established on experience in breeding from a male and female of distinct kinds.

When an ancon ewe is impregnated by a common ram, the increase resembles wholly either the ewe or the ram.

The increase of a common ewe, impregnated by an ancon ram, follows entirely the one or the other, without blending any of the distinguishing and essential peculiarities of both.

The most obvious difference between the young of this and other breeds, consists in the shortness of the legs of the former, which combined with debility or defect of organization, often makes them cripples in maturer age.

Frequent instances have happened where common ewes have had twins by ancon rams, when one exhibited the complete marks and features of the ewe, the other of the ram. The contrast has been rendered singularly striking when one short-legged and one long-legged lamb, produced at a birth, have been seen sucking the dam at the same time.

The facts respecting the fleeces have not been so well ascertained. They have been judged by some to be finer and heavier than those of our common breed; by others, of a medium fineness, but possessing more uniformity of pile on the same, and on different sheep of this kind. I have seen instances of their varying considerably from each other.

One case, where the young assumed the perfect likeness of the ewe, together with a meliorated pile, apparently derived from the ram, is too interesting to be ommitted. The enclosed specimen of wool, No. 1, is from an ancon Merino: That is to say, the offspring of an ancon ewe and Merino ram. Its shape is the very image of the former: its wool, which covers almost the whole face, and extends quite down to the fetlocks, of a pretty fine quality (a common sign of the best blooded Merinos) partakes of the silky feel and felting quality of the latter; with, I judge, about the same portion of fineness as the fleeces, which my quarter-blooded Merinos ordinarily carry. The locks, No. 2 3 and 4 were clipped from a wether, ram

and ewe descended immediately from ancon parents on both sides. The fleece of the former weighed four pounds and a half; those of the two latter somewhat rising three pounds each.

The ancons have been observed to keep together, separating themselves from the rest of the flock, when put into enclosures with other sheep. The lambs are remarked to be less capable of standing up to suck without assistance, when first yeaned, than others. Although they arrive somewhat later at maturity, the sheep are said to live as long as those of our common breeds; unless in some cases, where by reason of their debility and decrepitude, their health is impaired and their lives shortened.

To whatever cause this may be attributed, whether arising from defect in vertebræ, muscle, joint, or limb, it is certain they can neither run nor jump like other sheep. They are more infirm in their organic construction, as well as more awkward in their gait, having their fore-legs always crooked, and their feet turned inwards when they walk. According to some information, the rams are commonly more deformed than the ewes.

Sprung from an individual, remarkable for what might be called a caprice of nature, it is not one of the least extraordinary circumstances, that this misshapen and feeble race should propagate their own deformity and decrepitude until these characteristics have become constitutional and hereditary. It may be asked with reason, why such a breed should have been continued? The expectation of advantage, particularly in one way, doubtless prevailed over slighter considerations. We cannot boast of being such neat farmers, or of being so much attached to fine shapes in animals, as the more skilful graziers and breeders in Europe; consequently the prospect of gain in some useful quality, or even of exemption from inconvenience, would more readily recompense us for the want of beauty, or reconcile us to the sight of what, to more acute or fastidious spectators, might be considered its opposite. The unfavorable appearance of Merinos, according to the generally received ideas of handsome proportions in sheep, is understood to have operated considerably in retarding their spread in France and England, as well as in a smaller degree in the United States of America.

The breed of ancons was expected to be a valuable acquisition, on account of their being less able than others to get over fences.

In New England, beyond which they have rarely migrated, there are few commons, no hedges, no shepherds, no dogs whose business it is to watch flocks. The small freehold estates are enclosed by fences of wood or stone. These are frequently too low to prevent active sheep from breaking out of pastures, into meadows or grounds under cultivation. Crops are injured, farmers discouraged. Hopes were entertained that this evil would be remedied. It has been in part.

To countervail this advantage, the drovers have complained of the great difficulty of driving these cripples to market; and the butchers, that the carcass is smaller and less saleable, than that of our common breeds. Perhaps, it is commonly not so fat. I have perceived little difference in the taste of the mutton; and presume, if served at table in equal condition, it would hardly be distinguished by better judges. They have been remarked not to fatten so easily, possibly owing to less facility or industry in gathering food, or to some fault in the organic system.

Since the introduction of Merinos, which are equally gregarious, quiet, and orderly, probably better feeders, and with greater disposition to take fat, and more highly recommended by their fleeces, the ancon breed seems in danger of becoming almost extinct. They have so much declined, that for many months, it was not an easy matter for me to procure one for dissection in Boston. That operation was performed by the ingenious Dr. Shattuck, who makes the following remarks. "The sheep weighed just before it was killed, forty-five pounds. The most obvious difference in its skeleton from the skeleton of the common sheep, so far as any superficial observation has extended, consists in the greater looseness of the articulations, the diminished size of the bones; but more especially in the crookedness of its fore-legs, which causes them to appear like elbows, while the animal is walking. I have taken the liberty to call them *ancon*, from the Greek word which signifies elbow. On dissecting the sheep, I could not forbear noticing the flabby condition of the subscopularic muscles; this may partially account for the great feebleness of the animal, and its consequent quietude in pastures."

This skeleton will be presented to the President of the Royal Society, by the gentleman who is so obliging as to charge himself with the delivery of this letter.

I have been the more particular in the statement, because I deemed it important the point should be settled, so far as evidence can be adduced, that the preservation of different breeds, once clearly designated, in whatever manner obtained, whether from casualty, as in the present instance, or from calculation and cultivation, as in that of the new Leicester breed, depends more on some inherent quality in the blood, than in climate, food, or any other circumstance. Although it is allowed that these have no inconsiderable influence, paticularly the first, on the fleece, in the torrid zone. In all temperate regions and even in higher latitudes, where extreme cold prevails, flocks may be improved by care, or deteriorated by the want of it.

The settlement of this point would not fail to have a tendency to eradicate the remains of the pernicious prejudice, that the Merinos of Spain cannot be bred out of that country, without degenerating and losing their essential character for wool.

The beneficent Creator having ordained "that all creatures shall increase after their kind," has still left much for man to do, in regard to those which are made more immediately subservient to his use.

We are not ignorant how much the agricultural nations of Europe and America are indebted for meliorations in their husbandry to modern researches and discoveries in chemistry, natural history, and other branches of philosophy; as well as to experiments of eminent farmers, and especially breeders of cattle.

My experience has been too limited for me to flatter myself with being able to add to the stock of materials for investigation and improvement, except by becoming in some degree the medium of communication between the agriculturists of the two continents.

I have formerly exerted myself to enable my

countrymen to improve their breeds of useful animals, perhaps not altogether without success. My present object should rather be, to supply facilities and inducements for abler men, possessed of better opportunities, to discover and disclose the best means for selecting and spreading the most approved breed of fine woolled sheep, by which Merinos are meant, throughout the different countries which are known to be well adapted to their cultivation.

So tempting a motive for contributing my mite to the repertory of a society, justly celebrated for the extension of human knowledge and improvements, and which has done me the honor to enrol my name in their number, was not to be resisted; and the less, as it affords me occasion of presenting, at the same time, the homage of high respect for their President, with which I have the honor to be,

Sir, your most obedient servant,
D. HUMPHREYS.

A FINE COW.

We find the following account of a remarkable cow, in the report of the Committee on Cows for Windsor County, Vt., and which we copy from the *Woodstock Mercury*. We have seen some very fine Suffolk Pigs sent here by Mr. LOVERING, but did not know that he could beat almost any of us with his cows as well as pigs.

John L. Lovering, of Hartford, presented a native cow, for which we awarded him the first premium. We think this to be a very rare cow, and deserving of more than a passing notice. She is of good size, fine form, and is ten years old last spring. Mr. Lovering has put her upon repeated and thorough trials, and very carefully noted the results, and they will compare very favorably with any statements of the kind which have ever come under our notice. The cow was milked, and the milk weighed by an indifferent person, and the committee were furnished with a statement of the weight of the milk each night and morning, for ten days in June, from the 14th to the 23d inclusive. The aggregate was 516 pounds—ranging from 51 to 53 pounds per day. The milk for the last four days was made into butter, and after being worked dry and hard as it could be made, weighed ten pounds and five ounces, or 18 pounds per week. From the 1st to the 10th of September, she gave 294 pounds of milk, "while running in a pasture in which the water had all dried up, and the grass nearly so." In ten days in June, 1848, she gave 490 pounds; the same time in 1849, 501 pounds, and made 10 pounds of butter in four days; and in ten days in September, the same year, 399 1-2 pounds of milk. She has had only the common keeping of Vermont stock—hay and corn-fodder in winter, and common pasture with other cattle in summer; and no other feed during the year, except, for about two weeks before being turned to grass, she had a shovel full of cut feed (containing about 2 quarts of meal) once a day. Her owner says she will give milk all the year if he chooses.

Of all the fine cows which "have put themselves upon the record" within the past few years as great milkers, we know of none which equals this one of Mr. Lovering's for a yield of *milk*, and the yield of butter has very rarely been exceeded. Mr. L. says he "knows nothing of the pedigree of his cow, but intends to of her descendants." He has two heifers from her, which he considers of great promise; and from his well-known care and skill in such matters, we may expect to hear a good account of those "descendants" hereafter.

CROSBY MILLER, *for Committee.*

WHAT THE APPLE-MAN SAID.

A friend called upon us just now, clad in his linsey-woolsey frock and stout boots, and with a face all beaming with gladness, bid us a cheerful "good-morning, sir."

Editor.—Take a chair, sir.

Friend.—Can't stop but a moment. I came in with a load of apples, but thought I would just say good-morning to you.

E.—What are apples worth now?

F.—O, they vary in price as they vary in quality—$2,50, $3,00 and $3,25 a barrel. But mine were all engaged last fall. I shall sell $700,00 worth from my orchard of last fall crop.

E.—Well, friend M., that is a handsome income from one item of the farm. You have been a successful cultivator in all your crops, I believe, and are qualified to speak of most farm operations. Judging from the observations you have made, what do you suppose the farmer can do, now, the best to promote his interests?

F.—Well, I should say give his attention to *fruit*, and take the *Agricultural journals;* you have no idea how farmers are imposed upon in fruits and in grafting and budding; but then it is their own fault—if they would read the agricultural journals more, they would soon know how to do these things themselves, and then might snap their fingers at the itinerant budders and grafters!

The editor laid down his pen, very wisely rubbed his right eye, and said—"*them's our sent'ments 'zactly.*"

DRAINING IN INDIANA.—Gov. Wright, in his address before the Wayne County Agricultural Society, estimates the amount of marshy lands in Indiana at three million acres. These were generally avoided by early settlers as being comparatively worthless, but when drained they become eminently fertile. He says, "I know a farm of 160 acres that was sold five years ago for $500, that by an expenditure of less than $200, in draining and ditching, the present owner refuses now $3,000." Again he says, "I have a neighbor who informed me that in 1850, a very dry season, he had ditched a field that he previously put in corn; in the low and wet parts of the field he usually gathered in the fall a few nubbins, but went to the high ground for his crop. In the fall of last year, he obtained his best corn from the low land, his worst from the high; and the extra crop of the year paid for the whole expense of ditching."—*Albany Cultivator.*

☞ In character, manners and style, the supreme excellence is simplicity.

For the New England Farmer.

TREATMENT OF SICKLY PLANTS.

BY WM. J. A. BRADFORD.

MESSRS. EDITORS :—I do not remember to have seen in any papers of our country an account of a discovery which is here related, made in France some years ago, which consists of a very simple treatment by which plants affected with weakness or languishment are restored to vigor and health. The diseased conditions to which this remedy has been applied in France are described as debility, etiolation or bleaching, chlorosis (*chlorose,*) yellow gum, (*ictere,*) languishment, (*phthisie,*) emaciation or withering, (*consomption.*)

It has been the usual course in this country, and, before the discovery referred to, it was also the practice in France, to depend on a particular mode of cultivation to remedy the evils mentioned such as adapting the vegetable to the nature of the soil, tempering and amending the soil, and supplying the most suitable manures.

The remedy and the mode of applying it is described in the following lines. The article used is called by the inventor, in his description, soluble salts of iron, (*les sels de fer solubles,*) and is variously named sulfate de fer, sulphate of iron, and, as synonymous with it, vitriol vert, couperose vert, (green vitriol, green copperas.) This can be no other than what is known with us as copperas, or sulphate of iron.

Dr. Darwin, in his Philosophy of Agriculture, published in 1800, suggests that green vitriol might be found to be a remedy for the gum secretion in trees, though I do not know that it has been tried until the recent experiments made as herein related.

In 1840, a scientific farmer in France, guided, as he says, by some points of resemblance which he had observed between the coloring principle of the blood, and the coloring principle of vegetables, administered copperas (*sulfate de fer*) to some hortensias affected to a high degree with the diseased condition referred to. The singular results obtained, led him to repeat his first trials, to vary them, and to apply them to plants of different families. At the end of autumn he was convinced, and to satisfy others he proceeded to follow out his experiments in 1841, with equal success, under the eyes of some friends.

In 1843, the agricultural committee of the arrondissement of Chatillon appointed a committee to follow out the experiments, and the report was so favorable that a gold medal was awarded to the discoverer.

Copperas was applied by several farmers of Chatillon to artificial meadows, as a substitute for plaster. The spring being very wet, favored the action of the salt, and the success of the experiment led the same persons to repeat it in 1844. This year was very dry. The consequence was the salt was not immediately dissolved; it was converted into an insoluble oxyde of iron, and of course was not absorbed by the growing crop. The result was nothing.

This liability to oxydation, unless previously dissolved in water, or immediately melted by rains, is a great inconvenience attending its use in extended cultivation; and even under favorable conditions it is not recommended on fields of leguminous crops, nor to well grown cereals, unless the soil is almost entirely destitute of iron, which is not often the case.

But there are circumstances, says the discoverer, in which green copperas (*vitriol vert*) employed with discretion will produce important results. M. Dumont in 1845 applied it to part of a field of sickly winter wheat, which very soon became distinguishable at considerable distance, by the intensity of its color; and gave a product quintuple of that of parts of the same field left to themselves.

The action of copperas (*sels de fer*) upon the chromule is of such sensibility that letters or designs traced on a pale leaf with a pen dipped in a solution of it, very soon restore a fine green to the diseased leaf.

If the leaf is glaucous (*glauque*) that is, if it has become dry, says the inventor, absorption cannot take place. It will, of course, in that case, be useless to apply the solution to the leaf by sprinkling, and it will be necessary to have recourse to watering the roots in a dose of 150 grains (8 or 10 grammes) to a quart of water. Frequently, he says, it is best both to sprinkle and to water.

But the usual method of application directed is, to sprinkle the diseased grain, if it can be done, with copperas water, (*eau ferre,*) made with one pound avoirdupois of sulphate of iron (*sulfate de fer*) to about 50 gallons of water, to be applied on a cloudy and warm day. It is said that it will have no effect if the thermometer is below 55°, and to repeat it in 8 or 10 days, if necessary. It should be used immediately when the copperas is dissolved.

If water is not at hand the copperas, (*vitriol vert,*) may be pounded and mixed, at the moment of using, with a dry, finely-powdered soil, and scattered among the grain at the rate of 40 pounds to the acre; and repeated, if necessary, in a week or fortnight.

The application of this remedy is much more easy on tree and garden than field culture. On this scale, it has been practised at Chatillon and in the Jardin des Plants, Paris, with remarkable results. It was first applied to the roots, but since 1844 by sprinkling the leaves with a weak solution of 15 to 30 grains (1 or two grammes) to a quart.

W. J. A. B.

HARD WATER.

What waters are pure—From whence natural hard water is produced—The cause—The philosophy of cleansing—Its effects—Error in the use of lime—its benefits and virtues.

None of the waters produced by nature are entirely pure and soft—artificially distilled water alone is so, and often then, without care and some chemical knowledge of the process, it is not free from impurities.

The waters from primitive formations, particularly from mountainous districts, are almost pure, and springs and wells on sandy plains are nearly—owing to the rocks and soils being wholly composed of silicious and other constituents, insoluble in water. All streams and springs in secondary, or limestone countries, contain more or less materials constituting what are called *hard* water—and often the waters from sudden showers, which have been produced by evaporation from extensive regions of like formation, are sensibly affected.

All waters known as hard, result from some of

the acids or their salts being held in solution. The most common are the carbonic acid and the carbonates, and sulphurous and chloric acids and their combinations. All the waters containing carbonic acid gas, and sulphureted hydrogen, (the material that makes the sulphur springs of the country,) uncombined with the earths, are rendered soft by simple boiling, as the gases are expanded by heat and thrown off, and no deposit is left—but when united with lime, alumina (clay) or the metals, boiling deposits a portion by releasing the solvent, in the form of a hard stoney concretion.

The process used by washing-women, to *cleanse* the hard water by adding lye, ashes, or potash, is a strictly correct chemical process. Acids, and alkalies are antagonistical principles; one destroys or neutralizes the other, and renders both inert and harmless. The sulphuretted waters are more difficult to cleanse, or purify, than any other class except the muriates (acid of common salt, now called chlorates,)as they adhere to their combinations with greater tenacity.

The effects produced on hard water in washing, where soap is used, is very simple when investigated. Soap is a compound of an alkali and animal fat, or vegetable oils and resins, and when added to water containing any acid, or acidulated substance, the acid, by its chemical affinities, seizes and neutralizes the alkali of the soap, disengaging the fatty substance in the same shape it was originally, and in the worst possible shape for cleansing the person or clothing.

There is a vulgar error prevailing among the people generally, that it is dangerous to add lime to wells and cisterns, on account of its rendering the water *hard*. There is no greater fallacy among our traditionary belief. Lime is strictly an alkaline substance, and as such, is a neutralizer of all the acids that water contains, and may be freely used when in a *quick* or unslacked state—old and airslacked is hurtful, as it has become a sub-carbonate. One ounce of fresh quick lime, dissolved in water, will soften two barrels of ordinary hard water, and render fit for washing purposes. It is also advantegeously used to sweeten cistern water when it becomes stagnant, and of bad odor, and the cheapest and most ready deodorizer of all unpleasant, unhealthy effluvia.—*Rural New-Yorker.*

For the New England Farmer.

DANVERS WINTER SWEET APPLE.

BY J. F. HYDE.

Mr. Editor:—In your paper of the 7th Feb., I noticed an article on the "History of the apple tree," by your valuable correspondent, S. P. Fowler, Esq., of Danvers, in which he speaks of the variety known as *Danvers Winter Sweet*. Now I would not have the hardihood to contradict a statement made by a gentleman of his standing and ability; but my experience in growing this variety will not allow me to agree with him in saying that it is one of the finest varieties, or that it is profitable to raise for market. On the contrary, when I picked my apples last fall, I was compelled to own—notwithstanding I had recommended it to others—that it was not a good kind to raise. In fact, I almost made up my mind to graft them over next spring with something better. I will now give my objections: In the first place, the apples on the trees are all sizes, from very small to about medium, then nine-tenths of them are more or less covered with dark rusty specks, which so much disfigure them as to render them almost unsalable.

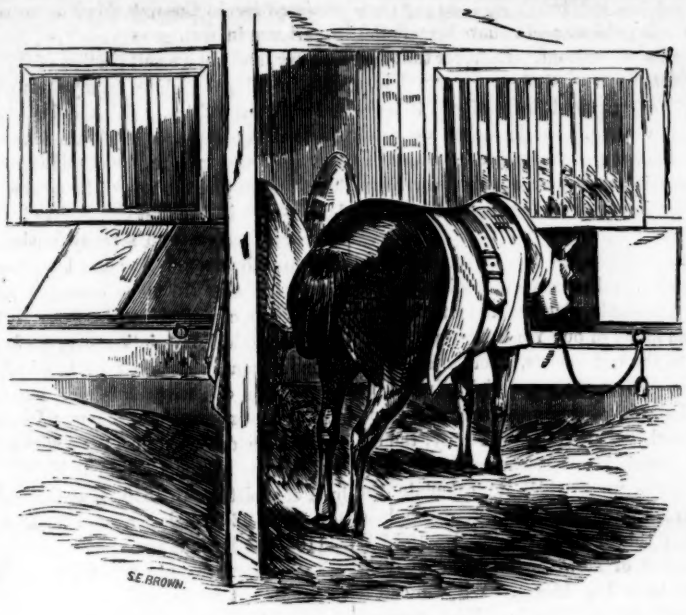
The above are my principal objections. I have no reason to find fault on the score of productiveness, for it is a constant though not a great bearer. My trees are well taken care of, and are on good ground, good for most kinds of apples, but perhaps not for this; one tree stands in a deep, black loam, with a clayey subsoil, quite moist; while others are on higher and dryer land, where is found a deep yellow loam, with a subsoil of gravelly loam. In both these situations the apples are very imperfect; if the variety grows well with others I say *tres bien*, I am glad of it, it will show that it is either the fault of my soil, or my *own* fault in not taking proper care of the trees. I will here state that I am quite positive, in fact, I *know* that I have the *true* kind, for I have exhibited it at the rooms of the Mass. Horticultural Society a number of years in succession, and it has been pronounced *right;* no one has ever doubted, nor can they. I well know that I am speaking against an apple that has been recommended by Pomological Conventions and Horticultural Societies, at different times and places, but I can't help that; what I have stated above are facts, and if they tend to injure the reputation of this variety, it is all right, for we don't want a kind that has the *name* of being good and is not; we want the "game as well as the name." I have written this partly for the purpose of drawing out the opinions of others in regard to this apple. Perhaps it does well in its native town, and may be in other places. I hope we may hear from others in respect to it. Yours, &c., J. F. H.

Newton Centre, Feb. 16, 1852.

Success in Farming—Its Secret.—Universal success in agriculture often dooms the favored man to the envy of his fellows. It has even called down upon him the wrathful superstitions of a whole neighborhood. The great diffusion of light and knowledge, however, is dispelling the horror of "book" or scientific farming.

Pliny gives a case among the Romans, where Cresinus was cited before the people to answer to a charge of sorcery founded upon the fact of his gathering greater crops than his neighbors from a small spot of ground. In answer, Cresinus produced his efficient and superior instruments, his well fed oxen, and a hale young woman. Pointing to them, he exclaimed—"There, Romans, are my instruments of witchcraft; but I cannot here show you my labors, sweats, and anxious cares." Reader, skill and energy are the witches that now bring success to the husbandman.—*Rural New-Yorker.*

How to Catch a Sheep.—In catching sheep never seize them by the wool on the back, as it hurts them exceedingly, and has, in some cases, been known to kill them, particularly in hot weather, if they are large and fat. Indeed, the best way is to avoid the wool altogether, and to accustom yourself to take them by the hind leg, or, what is still better, by the neck, placing one hand under the jaw, and the other at the back of the ears; by lifting up the head, a child may hold almost any sheep.



PREVENTION OF CRIB-BITING.

This is a habit to which some horses are subject, and sometimes becomes so injurious to the animal as to constitute "legal unsoundness." A remedy has been discovered by Sir Peter Laurie, of London, which the *Illustrated News* says is simple and efficient, and which is represented in the above engraving. The animal seizes violently the manger or some other fixture with his teeth, arching his neck, and sucking in a quantity of air with a peculiar noise. This habit is most frequent in young horses, or such as are highly fed or underworked, and curious enough, appears to be contagious, as one confirmed crib-biter will inoculate others with the practice, if allowed to associate. Muzzles, neck-straps, and several ingenious contrivances, have been used, with but little success. Sir Peter's remedy simply consists in preventing the animal from seizing the manger or any other object while tied up in the stable, by boarding over the space between the bottom of the hay-rack and the outer edge of the manger, forming a steep inclined plain. Portions of the boards can be partially removed to enable the horse to eat at stated times. This simple precaution is said by the most eminent authorities to be perfectly effectual in the prevention or cure of crib-biting.

Sound Doctrines.—We hope to receive many letters containing the doctrines expressed in the extract of a letter which we give below:—

Many persons object to an agricultural paper that is published far from home. But this I consider a whimsical error. The true principles of good farming are the same in California and Nova Scotia. Many of the crops may be different and some of the details, but the general principles are the same; and in my estimation farmers should patronize those papers most ably conducted, though they were published a thousand miles off, in preference to the more trashy affairs, because cheap and published near at home. J. D. Burditt.

Norwalk, Huron Co., Ohio.

For the New England Farmer.

INQUIRY.

Dear Sir:—I should be pleased to know through the *Farmer*, the best kind of early peas, and the best mode or practice of raising them. Whether to sow broadcast or plant in hills. The object is to raise and sell them green in the pod, to considerable amount. Yours, &c., G. L. O.

Watertown, Ct., Feb. 15, 1852.

Remarks.—On referring to Mr. Everett, the accomplished seedsman in the establishment of Messrs. Ruggles, Nourse, Mason, & Co., he informs us that the *Early Kent* is the best pea for early cultivation. Gentlemen whom he supplied last spring informed him that they got fine crops about the middle of June. They are thickly sowed in drills, three feet apart, and require no sticks.

Frost and Fruit.—A distinguished pomologist at Cincinnati, in writing us, says:—

Our peaches are mostly frozen. Other fruits, such as apples, pears, plums cherries and such hardy fruits, are all safe, and I doubt not we shall have an abundant crop. A. H. E.

Feb. 13, 1852.

THE GOLD PLACERS OF NEW ENGLAND.

Lumps of virgin gold are said to have been found, on the mountains of Vermont. However that may be, it is undoubtedly true, that every man has a gold mine, or its equivalent, in his farm, if he be so happy as to own one. He has that upon his own acres, which he can change into gold, at his pleasure; and with much more ease and certainty, than the California miner can change his dust into coin at the mint.

Let us look a moment, at the fact, that these places really exist, and at some of their advantages, over the California placers, that are turning the heads of so many of our Yankee boys.

According to the last census, there are in the State of Maine 46,760 farms; which, divided by the number of acres in the State, would give about 480 acres to each farm. In New Jersey, the average of each farm is about 172 acres. This probably is a fair basis upon which to calculate the number of farms in the other five New England States. Taking this basis it would give 108,761 farms for the rest of New England—or 155,521 for the whole, including Maine. We will call it 150,000, to keep within bounds. Now suppose that each farmer on an average has five acres of his farm under tillage. The average produce of corn per acre in Massachusetts, New Hampshire and Vermont, is about forty bushels, and the value about eighty cents per bushel. The number of acres under tillage, then, in New England, is 750,000 and the annual crop of these acres is thirty million bushels of corn, or its equivalent in agricultural productions. The value of this *is twenty-four millions of dollars*, every year dug up out of the soil by the farmer's hoe. The net profits of corn per acre, in the three States above mentioned, is about *eighteen* dollars. This would give a clear profit to New England farmers, on crops raised by the hoe, of *thirteen and a half millions* of dollars. And this is but a single item, in the wealth of our placers. Does California turn out any better? If Congress ever finds time to print the census of 1850, and give us the facts, we shall be able to give with some accuracy the whole product of our mines.

But this is only the beginning of their wealth. The mines of New England are not half wrought. If, with their present husbandry, each acre averages forty bushels of corn per acre, then with the help of science, each acre may be made to produce *eighty* bushels per acre; and that too with no large outlay of capital or labor. This may seem an extravagant calculation; but we have the facts to back up the position. In the *New England Farmer*, Vol. 2, page 42, it is stated that "R. W. Turner, of Newton Centre, raised from one acre and one hundred forty-four rods of land, four hundred and twenty-four heaping bushels of ears." This is over one hundred bushels to the acre. In the Patent Office Report for 1849-'50, pages 236-7, Arthur Rice, of Conway, Mass., states of his own experience in corn growing—"We live in a hilly country, and but a small portion of the land is suitable for tillage. I have on my farm about twenty acres fit for tillage. Till the last twenty years about thirty-five bushels of corn was considered an average crop per acre, for this land. Now it is at least *seventy-five* bushels. The produce of the turf land,—that is, the first crop,—has been for several years, from sixty to seventy bushels per acre. The crop the second year has been from eighty to ninety bushels. In some cases, as has been reported by a committee of the Conway Agricultural and Mechanical Association, over *one hundred*—and in one instance as high as *one hundred and twenty-two* bushels of shelled corn per acre." He says also of the experience of others, "I subjoin a statement of the amount of corn per acre raised by several farmers in this town in 1846-'47, as reported by a committee. In 1846, 134—132—111—110—103—96—92 bushels per acre. In 1847, 122—120—110—103 bushels per acre."

Facts like these, are not unfrequently reported to the Patent Office, and if there were any well-prepared index to the Reports of that office, it would be an easy thing to spread them before our farmers through the agricultural journals. But to get at anything wanted, in that strange medley of facts, now, is very much like looking for a needle in a haystack. O, for some utilitarian Yankee to have charge of that Report just for one year, to digest its contents and to give us an index in the Boston style of book-making! Would it not be refreshing?

There are probably instances known to almost every farmer, of an acre yielding eighty bushels of corn, and they are growing more common every year. Improved husbandry, upon the principles now advocated by our best agricultural journals, would easily make this the average yield in New England; and then we should have, as the annual product of our placers, sixty million bushels of corn and *forty-eight millions* of dollars, and a clear profit of *twenty-seven* millions of dollars. The gold is there in the soil, and all we have to do, is to dig it out.

We will now notice some of the many advantages in our New England mining over those of California.

New England mining is attended with comparatively *few hardships*. You have no long sea voyage, with its perilous sea-sickness—no exposure of health in tropical climates—no exposure of life and morals, among desperadoes and black-legs—no living in tents and subsisting upon the coarse fare of the mines. You may be all the while surrounded with the comforts and endearments of domestic life. You may live constantly in the smiles of the best of women, the mother of your children, and make home glad with your presence. Ah, what

aching hearts are there now, amid the wild sierras of that land of gold, pining to hear the loved voices, that make every New England home the abode of contentment and bliss. You have labor, indeed, upon these rugged acres, but it is not of that kind which despoils the body of its strength. It is the toil of Eden, blessing both the soil and its owner.

And this leads us to notice that the working of our placers *cultivates and invigorates the mind* much more than California mining. A little knowledge of geology and a little experience in the business are the chief mental qualities of the miner. The rest is mainly a business of brawn and muscle. Scientific husbandry is one of the best fields of mental culture. It trenches more or less upon every field of science, and taxes every faculty of the intellect. Geology, Botany, Chemistry and every branch of Natural Philosophy have a bearing upon the farmer's work. It cultivates the memory, the reason and the taste, to grow such articles as shall meet our numerous wants. For it is as much our privilege as it was Adam's to grow things "pleasant to the sight" as well as those "good for food." Horticulture and gardening—beautiful trees and fair flowers are legitimate objects of interest to the husbandman. They ought to be a part of every New Englander's rural home.

Then there is this additional advantage, that the man who mines the soil for bread, instead of gold, gains at once the ends, which the adventurer proposes as the object of his toils. The thousands who have gone to the shores of the Pacific are seeking, mainly, a happy home. This is the end of their toils. They mean to amass wealth and return to the well-ordered and peaceful homes of the East. They want a home and its comforts—good neighbors, good society, and good privileges for their rising familes. All these, any industrious farmer may have, in almost any corner of New England. All that the miner gets, beyond a happy home, will not be likely to add much to his happiness. Money or a fortune has very little to do with human happiness. The desires must be controlled so that they shall not constantly stretch away after riches beyond a competency.

Mining for bread is the most *certain* business a man can follow for a livelihood, while mining for gold is the most *uncertain*. Nine farmers out of ten, probably, succeed in business and gain a competency. Their failures are generally owing to speculations out of their line of business. In mining for gold, probably nine out of ten fail. A large per cent. die on the passage to or from the mines—more lose their health amid the imprudence and hardships of a new mode of life—and the great majority never get gold enough to cover their expenses, and pay for their time. Is it wise, then, to forsake these good old acres of New England, on a perilous and uncertain adventure, to the Eldorado of the Pacific?

Then, last and best, our Placers are *inexhaustible*. It may be, the gulches and cayotes of California will never give out; but, if so, they will prove the first gold mines of this character. However that may be, our placers will always yield bread, and will yield it, in increasing abundance, as they are wrought. Every rock is a store-house of food, for man and beast, wisely locked up by Almighty power against the too prodigal use of man. Our granite soils are rich in the food of plants. The potash that enters so largely into all trees, fruits and grains, is there in great abundance. It only needs science to unlock the storehouse, and teach us its economical use. New England, instead of being so large a market for the flour, the corn, beef and pork of the West, may feed her own population, and thrice its present number, with perfect ease. Let California then take care of her gold. We have richer mines at home. Ho! for the golden placers of New England. Who will work *them?*

For the New England Farmer.

RACES AND VARIETIES OF ANIMALS.

BY JOSIAH STEVENS.

Mr. Brown: — A writer in a late *N. E. Farmer*, under the foregoing caption, in alluding to a new variety of sheep, referred to in the communication of Col. David Humphrey, to the Philosophical Society of London, in 1811, and called by him the "Otter or Ancon Breed," puts forth the following interrogatory. "Are there races of sheep of the form and description here given, now existing in New England?"

In answer, I would say, that upon the farm of the late Col. John Head, of Hooksett, N. H., there is a flock of sheep of about twelve in number, answering in every respect the description given by Col. Humphrey—of their origin I have no information.

I have often tried (but without success) to purchase them, for the reason that they can neither run nor jump. The present owner, Nathaniel Head, gives them the name of Creepers. J. S.

Monument Hill, Concord, N. H., March 1, 1852.

P. S. I learn by a member of the family that they were informed by those from whom they were obtained that they were of the "Otter Breed."

J. S.

How to Judge Cattle.—In all domestic animals, the skin, or hide, forms one of the best means by which to estimate their fattening properties. In the sandling of oxen, if the hide be found soft and silky to the touch, it affords a proof of tendency to take meat. A beast having a perfect touch, will have a thick, loose skin, floating, as it were, on a layer of soft fat, yielding to the slightest pressure, and springing back towards the finger like a piece of soft leather. Such a skin will be usually covered with an abundance of soft, glossy hair,

feeling like a bed of moss—and hence is ever termed a mossy skin. But a thick-set, hard, short hair, always handles hard, and indicates a hard feeder.

For the New England Farmer.

CRANBERRY CULTURE.

Mr. Brown:—Seeing several communications in the *Farmer*, on the cultivation of the cranberry, I thought I would venture a few observations. It is generally observed that in cranberry meadows, the fruit is grown on isolated plats, some of them fruiting alternate years, some bearing every year, and others always barren. The question arises, what are the causes of this variation. It is a noticable fact, that the plants generally grow in plats of a rod square, and less. How did these originate? I think that they came from the seed. In passing over a meadow one will notice a difference in the foliage almost as striking as in the foliage of the strawberry plants. The fruit will differ as much in form, as a pine, from an alpine strawberry. In the flavor and amount of acidity there is a wide difference. A plant will bear fruit in three or four years from the seed, and continue bearing for several years. After that it will become old, large, and barren.

It does not root from its runners unless they become covered with earth, or the scum that floats upon the water; as the water (in the summer) settles away it falls upon the plants and keeps them moist, which causes them to root. They will strike root as readily as the quince, if layered in upland. In meadows where there is no scum to form new runners, they grow several feet long with no roots except the parent, or seedling roots, the main stem grows large, and the plant barren. Is this barrenness caused by a deficit of roots to sustain an overgrown top, or is it old age? I think it is not old age, for by setting them in moist upland, and layering in the tops, or runners, they will root readily and fruit. A layer will strike a handsome set of roots in three weeks, over two inches in length. That the cranberry can be cultivated on upland is beyond a doubt. Why is it that so many have not succeeded? I think the greatest trouble was in setting poor plants, and not giving them sufficient moisture. Mr. Cole, in his Fruit Book, estimates that in the State of Maine more than 2,000,000 of varieties of the apple have been produced; of that vast number few have been found worthy of cultivation. May not as small a proportion of the cranberry plants growing wild be worthy of even a trial?

We all know the disadvantage that one would labor under if he should set a bed of strawberry plants gathered from the fields and meadows; he would see fine plants but no fruit. Does not the cranberry planter labor under the same disadvantage? But the strawberry planter has the benefit of the amateur's experiment, whose productions are vastly superior to those not domesticated. Is there not as good a field for the amateur's skill in ameliorating, and domesticating the cranberry to garden culture?

If they commence with the seed, is there reason to doubt that they would be improved as much as the strawberry which appears in the height of perfection, compared to what it was a few years ago.

Yours, A Subscriber.

For the New England Farmer.

COWS—CARROTS—WHEAT.

I notice a communication in your last number, in regard to feeding carrots to milk cows, which confirms my own observation on the subject. And now wish to inquire if you, or any of your correspondents, have had any experience in feeding them to young cattle (3 and 4 year olds) that are being fed for market, and if so, what has been the result? Their is an opinion prevalent here, among some cattle growers, that they possess no fattening properties and think they are hurtful.

H. S. Morse, of Shelburne, Vt., (who has the past summer, in company with S. W. Jewett, of Weybridge, imported some French Merino Sheep) this past season raised from four acres of land, 198 bushels of winter wheat. Can that be beat?

Yours truly, Edwin Stanton.

Painesville, Vt., Feb. 14, 1852.

Remarks.—We hope some of our experienced friends, perhaps Mr. Brooks, of Princeton, will answer the question in relation to feeding carrots, [or any other roots] to young stock. We doubt whether California can beat the yield of wheat mentioned, without smuggling some of their *ten pound* potatoes into the measure. We are glad to notice all about us a new interest in the cultivation of this important crop.

☞ The article in another part of this number, headed "*Intellectual and Rural Delights*," and the remarks which it has called forth by our associate, Mr. Holbrook, will be found worthy of an attentive perusal — especially by young men engaged in the business of cultivating the earth. A sort of discontent, and sometimes, we fear, a contempt for the noble and manly employment of husbandry, has found its way into the minds of too many. They are dazzled, we suspect, by the clinking coin of some returned Californian, or some dashing shop-keeper, out of the thousands who embarked with them.

Farm work requires a capital in coin, in talents and ability, and in muscle and sinew, as well as in merchandizing or navigating the ships of commerce. And when this capital is invested, farm work is no more a labor of drudgery than any other—it is not half so much so. The lawyer is tied to his terms, and the merchant to his counter; the physician to his never-ceasing horse-mill rounds, the clergyman to his parish, and the mechanic to his bench. But the farmer breathes the free winds of heaven on his hills, and drinks from the crystal springs that flow through his valleys. The first beams of the morning sun touch his brow amid the waving grain of his garnished fields, while he bathes his feet in the cool dews that have gathered upon the bending grass. He reclines at noon in the shade of his old trees, and walks among his springing corn, or profits by the cheerful criticisms of his wife and children upon his garden culture, as they stroll about among the plants he is rearing. He goes to

mill or to market at will,—attends the county fair in autumn with his fat oxen, lusty steers, or mammoth vegetables; takes a premium on orchards, bog meadows, or corn and cabbages, while his wife bears off the palm for making the best butter, and his unmarried daughter, under eighteen, receives the silver goblet for the best loaf of wheaten bread. He finds a day to look in upon the General Court, or perchance is a constituent part of that honorable body himself. He is the best man to conduct the town business, for a referee, for a juror, or for any other honorable calling.

If this be drudgery, what shall we call the confinement of the law office and court-room, or the judge's bench? what the dull routine of the merchant's duties behind the counter, with his daily liability to protested notes and bankruptcy? What the daily task of the mechanic, happy if released after a ten-hour's toil, or operators in the cotton mill, summoned by bell and encased in codes of regulations! No—it is not the employment of the fields that is drudgery—it is the man's mind that is enslaved. It does not spring from the sod, buoyant with life and intelligence, searching and inquiring into the wonderful operations above, beneath, and around him. Let him turn his thoughts to chemistry in its relations to his employment, and he will soon become convinced that no man has yet lived long enough to understand the strange yet beautiful operations constantly carried on in his trees, plants, flowers and animals.

While cultivating his fields, he is in the school-room of nature, and it is his own fault if he do not study her ways and make her subserve his purposes. She calls to him from her mountains and valleys and streams, from the air that cools his heated brow and the dust beneath his feet. She pleads eloquently for his attention through the birds of the air and the beasts of the field, in the change of the seasons, in showers, sunshine, frost and vapor. Is there no voice in these, to him who cuts the grain or fells the forest? Are these all a sealed book to thee because thou art a tiller of the soil? If so, awaken to their perpetual call, be led to a consideration of the delights which are hourly offered to thy mind, and rejoice in gratitude that thou art permitted to be free upon the acres which thou art gladdening by thy care.

There must be labor and care on the farm; and there is toil, confinement and anxiety in every other pursuit. "Hardly do we guess aright at things that are upon earth; and with labor do we find the things that are before us."

Sowing Seed.—Farmers, as well as other people, like to make good bargains, and we like to have them, especially when they buy a year's paper of us, and pay for it in advance. But that is not the bargain we are going to write about. It is the sowing of grass seed. If you would make a good bargain with mother earth, give her a plenty of seed. If you scrimp her, you cheat yourself and cheat your earth, and are guilty of double dishonesty. If you undertake to save five dollars in seed, you will lose twenty dollars in hay and pasture. Be wise, then, and sow bountifully, and you shall gather bountifully, and make a good bargain.—*Vermont State Journal.*

For the New England Farmer.

POTATO ROT.

Mr. Editor:—Much has been said and written on the subject of the potato rot, and the subject seems to have been exhausted long before this, but like the evils of intemperance, something new almost daily occurs. I do not expect to write a very learned article on the subject, as I have never written much for the press, but all farmers have had some experience in the cultivation of that indispensable article of food, the potato. Some writers have attempted to point out the cause of the rot while others have prescribed a cure. No one as yet, I think, has ascertained the whole cause, or has recommended a sure remedy. We have often seen it stated that charcoal would prevent the decay, but recently other writers say that charcoal is one cause of the rot. This I believe is true. Last season I planted potatoes on a piece of land which I burnt over and cleared in the spring, and those places where there was the greatest amount of charcoal and ashes, the potatoes decayed the most.

One writer recommends to keep the potato plant from the warm south wind. I think he is correct in his views on the subject, and while we would protect them from the warm south wind, I would have them freely exposed to the cool breezes of the north. In 1850 I had a potato patch so situated that a small grove almost entirely prevented the north and northeast wind from reaching it, that decayed badly, while a few rods from it, on my neighbor's land, on the same kind of soil, but a little higher up, the potatoes did not rot at all. We find it necessary in Vermont to have our wheat sowed on high land, where it will be much exposed to the wind, in order to secure a good crop, and in cool dry seasons the potato rot has not prevailed to any great extent. J. Dow.

East Corinth, Vt., Jan., 1852.

Remarks.—We think our correspondent must be mistaken when he says that "recently other writers say that charcoal is one cause of the rot." It is *not* the charcoal, but the carbonic acid given out while burning the wood upon the ground. Charcoal spread upon the soil in small quantities, has never been supposed to encourage the potato rot.

Norfolk Transactions.—We are indebted to the President of the Society, Hon. M. P. Wilder, for a copy of the *Transactions of the Norfolk County Agricultural Society*, for 1851. It contains the address of Mr. Russell, most of which we have already transferred to our columns, and of which we have already spoken as highly as we know how to speak. The reports, statements, &c., are full and well-drawn, and the whole printed in the best style of the art.

For the New England Farmer.

DOMESTIC POULTRY--BANTAMS.

Mr. Editor:—The many different kinds of bantams, if they cannot compete with some of the other varieties of domestic fowl in profit alone, certainly can in point of beauty, and to the student of nature they will always be an object of admiration.

The bantam has long been noted for the great bravery and pugnacity he exhibits even when matched with a cock of much greater size and natural advantages. I have seen one engage day after day, with the same enemy, and after numerous battles he would show the same ardor to fight with his old adversary, who had been repeatedly his victor, that he did at first. These fowls are even more profitable than they are credited for; it costs less than half as much to keep them than it does the common fowl, and they deposit quite a number of eggs in the course of a year.

The hens are deservedly noted for their motherly kindness to their young, and perseverance in sitting; in fact, I think it almost cruel not to allow them to sit, even if you could break them, which I could never do in any humane manner. Of the many varieties, perhaps the following are the most worthy of attention.

The *Seabright*, has long been considered as the type of his fraternity. They are divided into two classes, viz: The gold and silver pencilled. Of the former, a model cock should be of a brilliant brownish orange color, with each feather tipped or margined with black, a rose comb well pointed behind, and with legs and bill of a dull blueish color is also indispensable. His weight should not exceed one pound. The hen should correspond in all particulars. The silver pencilled are of the same size, shape, form, &c., and are only distinguishable by the ground color, which should be of a silvery white instead of orange.

The *Black Bantam* "is a most beautiful example of a great soul in a little body;" it is even more pugnacious, jealous, and domineering, in proportion to its size, than the thorough bred game cock himself. The cock should have a full rose comb, clear and sinewy legs, glossy plumage, proud gait and air, with a flowing tail, and should not exceed twenty ounces in weight. The hen is quite inferior in general appearance, although she has quite a trim and womanly manner.

The common *White Bantam*, although inferior to either of the former, is a fowl of importance; it is usually feathered to the toes, and presents rather a junky appearance. Many other both useful and beautiful varieties of this fowl might be described here, but this article has become much longer than I at first intended, and I fear I ought almost to apologize for it. "Agricola."

Brooklyn, Feb. 27, 1852.

Poultry and Eggs.—I do a small business in raising and putting up garden seeds, and last fall, a year ago, as I was clearing out some red pepper seeds in my back yard, I threw the shucks and chaff promiscuously about. I soon observed my hens picking them up and swallowing them with great avidity. They soon commenced laying eggs, though they had laid none for a month before. I fed them regularly, two or three times a week, since then, with red pepper, and they have never yet stopped laying, summer or winter, spring or fall, except while they were hatching their chickens; and I am confident, from more than a year's experience, that, by this method, hens may be made to lay the year round.—*Dollar Newspaper.*

WINTER BIRDS.

The Portland Advertiser states that several species of birds, rarely met with in that vicinity, have appeared there this winter: among others the "great American shrike, or butcher bird," the "pine grosbeak," and the "lesser red poll linnet." The *grosbeaks* are about the size of the robin—the male being of a rich crimson and slate color, the females slate and dull yellow. The *linnets* are little smaller than the chirping sparrow—the males having a bright cap of crimson, and breasts of rich pink color, while the female and young have none of the pink color.

The Beverly Citizen says:

We are fearful that the extreme cold weather of the past months, and the great quantity of snow that has fallen upon the earth, may have been fatal to many of our resident birds. Among those which are most common, are, besides the snow-buntings, that most commonly appear in flocks, the great and little speckled Woodpeckers, the Chickadee, or Black-capt Titmouse, and the Canada Sparrow.

We have not lately heard the lively voice of the chickadee, nor the scream of the speckled woodpecker, each of which were quite common in the early part of the present season. They may have been driven to other territories; and they may have perished. The chickadee, though one of the smallest of our birds, is capable of enduring a very great degree of cold, and is one of the most useful of the feathered tribe. This little bird lives almost entirely upon insects and their larvæ, and is indefatigable in his labors to obtain them; constantly exploring every branch of every tree, winding round them in all directions, and devouring every insect and grub that exists on the surface. The speckled woodpecker follows him, with his strong bill; he does more than merely to glean his repast from the surface, he bores into the wood and bark of the trees, and drags out the mischievous grub from his hiding place.

BOOKS.

The Complete Farmer and Gardener. Saxton: N. Y.—This work was written and compiled by Thomas G. Fessenden, Esq., one of the most distinguished agricultural writers that New England has ever had.

The Family Kitchen Gardener. By Robert Buist, author of two or three works on Floriculture, and a practical gardener. Saxton: N. Y.

With these two books before him, with a careful reference to their contents, and such inquiry and observation as every one can make, any man may take a farm or a garden and get along with it tolerably well so far as a knowledge of the time of sowing, planting, harvesting, preparation of the soil, &c., are concerned; and to those of experience, they will serve as important helps in many respects. They are both written by men "who

practised what they preached," and on whose teachings we may rely with undoubting confidence. The books are printed and bound in the neatest manner, illustrated by numerous engravings. And what is still more valuable, both are accompanied by correct and comprehensive indices. You are not obliged to waste time in hunting through the volume for a particular subject, but turn to it at once on looking at the index.

We find pleasure in speaking of these works, and in calling attention to the agricultural publications of Mr. SAXTON. It is doubtful whether any publisher of agricultural books will find an immediate return of his outlay—and as the books are really what are needed, we look upon him somewhat as a public benefactor. We have examined his works which relate to the farm with interest and care, and do not think of one but has the stamp of sterling merit. A multiplication of these works will multiply the profits of the farm and garden.

WALKS AND TALKS OF AN AMERICAN FARMER IN ENGLAND: By F. L. OLMSTEAD, a Farmer of Long Island, N. Y.—This is one of PUTNAM'S Semi-Monthly publications for travellers and the fireside, and an admirable book it is. Mr. Olmstead, with a brother and a friend, strapt on their knapsacks and took a ramble of several months among the farmers of England, saw the cottagers in their rural homes, conversed with them, and their wives and children, ate at their tables, and slept in their thatch-covered attics. There is no grumbling or fault-finding in the book. The writer found hospitality and friends everywhere, or if he did not, he has had the good sense not to mar his interesting pages with dolorous complaints. The book is written without the slightest effort to appear learned, in a pleasant, attractive, common sense way, and thus will come home to the heart of every person of common sense who reads it.

The author has seasoned his rural narrative most judiciously, with brief descriptions of some of the old castles, parks, halls, furniture, &c. It is a delightful book every way; and this opinion will appear to the reader an honest one, when he is informed that it was *purchased* with a "quarter" from our own pocket, a part of the profits from a last year's crop of eggs and potatoes! If we find ourself upon Long Island again, we shall be strongly tempted to turn aside and hold a further chat with the good-natured author of Walks and Talks in England. We have only room now for an extract or two.

It may be proper for me here to record my observation of the general disposition of the English people towards our nation, which I confess I did not find to be exactly what I had anticipated, and which I think must be generally much misconceived in the United States.

There is a certain class of the English, conservative Whigs more than Tories, as I met them, that look upon the United States people as a nation of vulgar, blustering, impertinent, rowdy radicals; very much as a certain set with us look upon the young mechanics and butcher-boys of the town—troublesome, dangerous, and very "low," but who are necessary to put out fires, and whose votes are of value at elections, and whom it therefore *pays* to make some occasional show of respect to, and it is best to keep on civil terms with. A considerable number of snobbish, pretending, awkwardly positioned, sub-aristocratic, super-sensible people, that swear by the *Times*, and have taken their cue from Trollope, follow in their wake. But the great mass of the educated classes regard us very differently; not with unqualified respect and unalloyed admiration, but much as we of the Atlantic States regard California—a wild, dare-devil, younger brother, with some most dangerous and reprehensible habits, and some most noble qualities, a capital fellow, in fact, if he would but have done sowing his wild oats.

* * * * *

Altogether, considering the exceedingly queer company English travellers seem usually to keep when in the United States, and the atrocious caricatures in which, with few exceptions, they have represented our manners and customs to their countrymen, I was surprised at the general respect and the degree of correct appreciation of us that I commonly found. There is no country not covered by a British flag in the world, that the British of 1850 have anything like the degree of sympathy with, and affection for, that they have for the United States.

THE COTTAGE AND FARM BEE-KEEPER. By a Country Curate. SAXTON, N. Y.—This is an admirable book every way—text, illustrations, paper, type and binding. Those who desire information on the subject had better obtain it. It is sold, beautiful as it is, at the low price of fifty cents. We have marked passages to transfer to our columns, and shall allude to it again.

"AN ESSAY ON MANURES," and "THE ELEMENTS OF AGRICULTURE," two small books in pamphlet form, both prepared with great care and printed handsomely, are also issued by SAXTON. Sold at 25 cents each; so cheap that they may be purchased by all, and will prove of great service to those who are seeking a better course of cultivation.

LARGE CORN FIELDS.

A statement is published in some of the Ohio papers that J. Davis, of Ross county, in that State, cultivates 1800 acres of Indian corn, and that he has this winter, "a corn crib filled, which is three miles long, ten feet high and six feet wide!"

The corn crib part of the above story is pretty tough, but in the number of acres cultivated Mr. Davis is beaten by a farmer in North Carolina, who cultivates 3500 acres of land, and makes an average annual crop of corn, (unless in bad seasons, or loss by flood or accident,) *of one hundred and fifty thousand bushels! The Plow*, a new agricultural monthly, published in New York, vouches for the truth of the above statement, and

says that the crop is cultivated mostly with the plow—dispensing almost entirely with hilling, and using the hoe as little as possible. The corn is all shelled by horse power machinery, but the proprietor has it in serious consideration to use steam.

But even this large corn field is beaten by that of H. L. Ellsworth, formerly Commissioner of Patents, and now of Indiana. He cultivates twelve thousand acres of corn. Just imagine a corn field ten times as large as the territory on which Boston proper is located!

For the New England Farmer.

WHAT BIRD IS THAT?

Friend Brown:—I received your note, describing a new bird which has appeared on your farm, and which you accuse of destroying the blossom buds of your apple trees, an offence which I should be tempted to punish *capitally*, although I have never shot a single bird on my farm since I occupied it, and suffer the crows to sit daily on my *tall pine* within reach of my rifle, unharmed. I am willing to pay the birds for their society and music, in almost any kind of grain, and feel that there is a balance due them still, for relieving my fields of myriads of worms and insects, which make up their *animal* diet. But when it comes to "making game" of my fruit buds, I am not prepared to agree to their proposition.

The bird you describe is the Pine Grosbeak, or Bullfinch, described by Nuttall as follows:

"The wings with two white bands and the tail black, secondaries edged with white; length about 9 inches. *Adult male* tinged with reddish orange, beneath inclined more to yellow, above varied with blackish brown. In the *young male* the same parts and the rump are carmine of different shades, except the flanks, abdomen and vent, which are cinereous. *Female*, with the top of the head and rump brownish orange, below cinereous, with a faint tinge of orange."

This bird is confined almost exclusively to the arctic regions, and appears in the Northern States of the Union, only in very severe winters. They probably have *come south to warm themselves* this winter in our genial climate, where they find the thermometer only 20° below zero!

They feed principally upon berries and upon the buds of trees. In my collection of stuffed birds, I have two specimens, which I procured at Chester, N. H., in the winter of 1836-7.

I find in my catalogue, a memorandum showing that these birds were very abundant during that winter; and that I could not learn that they had ever been seen before. At that time they appeared very tame, and feasted themselves upon the berries of the mountain-ash close by the house. I have never seen any but *young* birds, of the species.

They look about the size of the robin, of a rather shorter and more *chubby* form, and have a short, thick bill. I should think gentlemen interested in Ornithology would be glad to avail themselves of the aid of yourself and your man James to procure specimens of a bird so rare and beautiful.

My collection, by the way, which comprises about a hundred specimens, and which I picked up from time to time about fifteen or eighteen years ago, are in almost as perfect preservation as when first procured. I say this by way of encouragement to any of your readers, who may feel an interest in this most fascinating branch of study. Any country boy of common ingenuity, may obtain at very little cost of money, a collection of native birds, which will constitute one of the most beautiful and useful ornaments for *his home* that can be imagined. A taste for the subject as a *science* would soon lead to an accurate knowledge of the habits of birds, and prevent their wanton destruction.

Yours truly,

Henry F. French.

THE FOREST TREE.

BY ELIZA COOK.

Up with your heads, ye sylvan lords,
Wave proudly in the breeze,
For our cradle bands and coffin boards
Must come from the forest trees.

We bless you for your summer shade,
When our weak limbs fail and tire;
Our thanks are due for your winter aid,
When we pile the bright log fire.

O! where would be our rule on the seas,
And the fame of the sailor band,
Were it not for the oak and cloud-crowned pine
That sprung on the quiet land?

When the ribs and the mast of the good ship live
And weather the gale with ease,
Take his glass from the tar who will no give
A health to the forest trees.

Ye lend to life its earliest joy,
And wait on its latest page;
In the circling hoop for the rosy boy,
And the easy chair for age.

The old man totters on his way,
With footsteps short and slow,
But without the stick for his help and stay,
Not a yard's length could he go.

The hazel twig in the stripling's hand,
Hath magic power to please;
And the trusty staff and slender wand
Are plucked from the forest trees.

For the New England Farmer.

ONIONS.

Mr. Editor:—I wish for a little information on the subject of raising onions. I tried some two or three years, and have utterly failed; the immediate cause is maggots, which attack the roots about the time they begin to bottom. If you can give the desired information through the columns of your valuable paper, you will confer a favor on at least one subscriber. R.

Jan. 24, 1852.

Remarks.—There should be no difficulty in raising, generally, a plentiful crop of onions. They require a friable, loamy, rich and deep soil, not a sandy, or a clayey one. After a crop has been taken off the onion tops should be dug in with plenty of well-rotted manure. In the spring cover the bed liberally with ashes and dig it in, then roll the ground with a moderate pressure and sow the seed. If under this treatment you do not get a good crop of onions, friend "R.," it will be from some other cause than the want of good cultivation. You must then look to see if there are not shade trees too near or that the onion patch is in some way deprived of the full influences of the sun.

AN HOUR AT MR. SHELDON'S FARM.

Mr. *Sheldon* having attained some celebrity as a cattle breeder, and having a desire to look at some heifers in his barn, we passed an hour or two with him on Friday, on his premises. We found a herd of some forty or fifty neat cattle, including calves, of the native and mixed breeds of Devon, Durham and Ayrshire. Some of them were very fine. His piggery is extensive, and contained beautiful litters of crosses of the Suffolk and Middlesex, and some very fine breeding animals. But in passing over the farm we felt more disposed to give him credit for the extent and beauty of his orcharding than for his stock. He has about twelve acres set with apple trees, making one thousand in all, that are not only a credit to his skill as a cultivator, but will soon repay him for his outlay. The trees having been judiciously trimmed, have flatly spreading tops, and their straight, smooth trunks, show no marks of carelessness in plowing the ground. He pointed out an orchard where an attempt had been made with trees taken from the same nursery, and transplanted at the same time his were, not one of which had attained a height of six feet, or borne an apple, while some of his are three inches in diameter and have produced several bushels to a tree. So much for culture.

For the New England Farmer.

EXTENSION OF FORESTS.

BY MORRELL ALLEN.

Mr Editor :—It is not yet two hundred years since most of the territory of Massachusetts was covered with a dense forest. Within the memory of some of the present generation all the improvements on farms which attracted much notice or occasioned many remarks, were the clearance of portions of forest and the preparation of the soil for cultivated crops. It is not, therefore, very wonderful that many farmers hear, with surprise, recommendations to plant forest trees, or that they should inquire, why urge us back into the woods, when we have but lately made our escape from them? This inquiry is certainly a very natural one in view of the recent settlement of the country; but when the present condition of our soils is considered, it will appear that no more important improvements can be suggested to many of our farmers than the contraction of cultivated fields and the extension of forests. In every section of the State we see wide tracts of land which have been cropped with different kinds of grain till they will no longer yield a compensation for the labor bestowed. The renovation of these exhausted lands in a course of cultivation with the present resources of farmers is impracticable; if they could employ the requisite number of laborers, they would often fail of obtaining the necessary quantity of vegetable matter to re-invigorate their fields. Eager to reap the fruits of virgin soils, we have extended our cleared fields beyond our powers of right management. The fields are now demanding compensation for the fruits they have so liberally yielded in past time; those fruits we have dispersed into different parts of the world, and do not now possess the means of direct payment of the debt. We can do it gradually, as heavy demands on a community are lessened by sinking funds. Plant forest trees, and with every year of growth they will be scattering substances which have been taken away in cropping; ultimately the fields will be restored to nearly pristine richness; if posterity should need them for cultivation, they would find in them two valuable prizes, one in wood and timber, and the other in soil of sufficient energy to yield abundant crops. This may seem to some farmers a work requiring too much time; and they may feel disposed to inquire if there be not some shorter way of renovating soils? There certainly is, and we earnestly recommend the mixture of soils and the manufacture of manure to the extent of every farmer's power. But when this is done a large breadth of surface must be left untouched. Reduce the fields of cultivation, but not in the least the quantity of labor or manure bestowed. In several of the counties if the farmers would reduce the quantity of land now called cultivated, to one-half the present extent, with the same amount of labor and manure they would reap far greater products. Some may suppose the planting of trees is work for the exclusive benefit of posterity; it is not so; the attention of the writer was directed to this subject rather late in life, but has for several years been using fuel of his own raising. Since 1833 a number of old fields have been planted with different kinds of forest trees, and several of them have been advanced in value by the operation, not less than 150 per cent. We have satisfactory and strong evidence that this subject demands the attention and experiments of our farmers, that their labors in this direction will promote personal prosperity and conduce in a high degree to the welfare of posterity. M. A.

Pembroke, Feb. 24, 1852.

Remarks.—The subject matter of the article is worthy of careful consideration. It discusses the whole matter in the briefest manner, and gives the remedy for the evil. Extend your forests and manure your cultivated lands more highly. We hope to hear from the writer again.

For the New England Farmer.

FARM SCHOOLS.

Mr. Editor :—Quite an interest has been taken in the last few years on the subject of agricultural education in connection with farm schools. All this shows that the right spirit is among our farmers in regard to educating themselves, and more particularly their sons, both in practical and scientific agriculture. In a late number of the *Farmer*, there is a very good article on a "Model Farm School," by Mr. French. Probably there are many other gentlemen in your State, each of whom might suggest a good plan for a "Farm School." But we think that the greatest difficulty will be found in bringing down these plans to a practical operation. In fact, to know just how to manage, and *who* can manage such an institution successfully, is the great question to be settled. There are many men, I doubt not, in any State, who might think themselves just "the *man*" to manage such a school. But in all faith we must say, that we do not know where the *first man* can be found in this country to manage such a school. But then

if this be the case, must we sit still and do nothing!—by no means, a beginning must be made. On thought, we are much inclined to the opinion of some other men on this subject—men, too, who have given the subject a good deal of study. And they say that they place very little confidence in what the State may do in founding an agricultural college with an experimental farm attached. They had much rather depend on private enterprise and means, where the institution could be kept free from the influences of politicians or any set of men who would do more to cumber its progress and give a few heavy salaries to professors and assistants, for a small amount of labor performed. We are inclined to think with others, that if we succeed at all in this business we must commence in a small way at first, with a few students, on an economical plan. Everything about the school and farm should be made as systematic as possible. Should an institution or college of this kind be heavily endowed from the State, and then through want of the right kind of management go down in a few years, such a shock would be given to the cause that it would not recover again in the next twenty-five years. We are not of the opinion that the importation of *foreign teachers* would be of much consequence to our schools, to any great extent. The truth is, the man must be made and manufactured on the spot, and there is plenty of material to work on, if it can be only formed into the right shape. And another thing is, the friends of agriculture must not expect too much from an institution of this kind. It must take some time before a school of this kind can show to the community around any great results from its operations. After all the talk in the States and Legislatures on this subject, there is not one of them that knew just exactly what they want, for the good reason that not any of them has had the practical knowledge necessary to know what to want. But then a beginning must be made, and where there is a will to do, there will be a way provided. All talk and no action, is not the practical thing to carry it out. But action, and energy, and interest, must all be combined together, to carry this matter forward to success. And if the friends of this *scheme* will act, we shall see something yet.

Yours truly, L. DURAND.

Derby, Conn., Feb. 25, 1852.

TO CORRESPONDENTS.

An excellent communication from "S.," dated Feb. 8, was mislaid, (not forgotten) and consequently no reference made to it. We thank friend "S." for the interest he manifests for us, and are confident he will appreciate our motives in placing his communication on file, for future use or reference. His communications on other topics will be gladly received.

G. F. F., *Grantham, N. H.*—Make your currant bushes bear well by selecting the right kinds first—not the common red or white, but what are called the Red Dutch or White Dutch. Give them a good deep, rich soil, keep the weeds and grass away, and you will have no cause of complaint for want of crop. Do not allow the bush to produce suckers, or to grow into a thick clump and get covered with moss; nor propagate by suckers. Some persons prefer training the bushes into the form of trees. They look neatly in this way, but require considerable watching and care, and will scarcely produce so large a crop as you will get from the bushes—but the fruit will be larger. All superfluous wood should be cut out late in the autumn. A change of bushes once in five or six years is also advisable.

THE ORCHARD CATERPILLAR.

BY LEVI BARTLETT, ESQ.

In the *Farmer* of the 14th inst., I notice an article on the orchard caterpillar, by H. of Bedford. His history of the spring caterpillars which feed upon the apple and cherry tree—or rather upon the leaves of those trees—is quite correct. They are a very different insect from the summer, or web caterpillars, that have become so abundant within a few years past. The elm, ash, cherry, and many other kinds of trees, besides the apple, were disfigured by their large webs the past season. The eggs from which the spring or early caterpillars are hatched, are deposited by a miller or moth "transformed from the caterpillar." The eggs are placed around the limbs and twigs, forming a kind of ring or bracelet; this ring consists of three or four hundred eggs, in the form of short cylinders, standing on their ends, close together, and covered with a thick coat of brown varnish. They remain in a dormant state from the time they are deposited by the winged moth in July or August, till about the time of the unfolding of the apple and cherry leaf in the latter part of April or beginning of May. They continue in the caterpillar state about seven weeks. Their habits, ravages, and the unsightly appearance of their nests, are so generally understood, that nothing further need be said upon these points. Many of the eggs can be removed from the lower limbs of the trees by searching for them in the winter or early spring. Those that escape and hatch out, should be destroyed soon as the nests are seen. For this purpose a spiral brush is the most effective instrument I have ever used for ridding my trees of these "useless intruders." A mullen head tied to a pole answers as a substitute for the brush; its rough surface readily winds up the silky nests with its occupants, and they are easily crushed.

Going over an orchard two or three times in this way with the brush, will rid it of the spring caterpillar. The summer, or web caterpillars, are hatched from eggs laid by the parent moth, (a winged insect,) in a cluster upon a leaf near the extremity of a limb. They are hatched from the last of June till the middle of August, some broods being earlier, and others later. The young caterpillars immediately begin to provide a shelter for themselves by covering the upper side of the leaf with a web, which is the result of the united labors of the whole brood. As they increase in size, they enlarge the web. Thus they go on increasing the size of the web, and devouring only the upper skin and pulpy portion of the leaf, leaving the veins and lower skin of the leaf untouched. Toward the end of August and during the month of September, they leave the trees and disperse, wandering about till they find suitable places for shelter and concealment. Here they wind their cocoons and remain through the winter. In the

months of June and July they are transformed into moths. These moths are white and without spots; their fore thighs are tawny yellow, their feet blackish. Their wings expand about one and a quarter inch. The only time we can attempt to exterminate these destructive insects with any prospect of success, is when they are young and first beginning to form their webs on the trees. So soon, then, as the webs appear on the extremities of the branches, they should be cut or stripped off and be crushed under foot. The cabbage butterfly, the black squash bug, and many other insects, deposit their eggs upon the under side of the leaf, similar to the parent of the caterpillar above described.—*Granite Farmer.*

EIGHTH AGRICULTURAL MEETING,

At the State House, March 9, 1852.

Subject for Discussion—*The Cultivation and Preservation of Fruit.*

The meeting last Tuesday evening was not so fully attended as some of the previous ones, on account of the unfavorable state of the weather. Hon. Mr. Wilder was prevented from being present to preside by indisposition, and Hon. R. B. Hubbard, of Sunderland, was called to the chair. He said that as he did not know until this evening that he was to preside, he had made no special preparation to speak upon the subject. The subject, he said, was one in which he felt, in common with all who are interested in agriculture, a deep interest. So closely allied to agriculture is the culture of fruit, that the condition of the latter may generally be regarded as a good index of the condition of the former. Wherever we find fruit culture well attended, we expect to find agriculture also receiving a good share of attention. There are many reasons why fruit culture should receive the attention not only of the Agriculturist and Horticulturist, but of the whole community. The first of these reasons is, that an abundance of good fruit is promotive of health. To be convinced of this we need but remember that Providence has provided an abundance of fruit for every month and season of the year; all medical men testify that ripe fruit in its season, in proper quantities, is conducive to health; another reason why fruit should be cultivated extensively is its effects upon morals. Some might smile at this idea, but he believed the connection was most intimate. Why was it, he asked, that there is such a lax opinion in regard to the purloining of fruit, when all the other products of the farm are guarded with so much care. In the eyes of the law the person who steals fruit is guilty of stealing, but public opinion regards it more lightly. Why is there this distinction? The only reason he could give, was that good fruit is so scarce, and this scarcity is urged as an excuse for these depredations. Make these fruits—these good fruits—as plenty as corn, and it would be held as sacred in the public estimation.

Mr. Hubbard said he regarded our climate as well adapted to the cultivation of fruit as that of any State in the Union. He doubted whether any climate was better than that of Massachusetts for fruit culture. Other climates will produce fruits which ours will not; but we can produce as large and valuable a variety as any other part of the globe. He mentioned the apple as one of the most valuable of our fruits. The pear grows as well here as any where else. There may be difficulty in starting the trees, but when underway, they do well. Peaches are more difficult to raise, still these difficulties are not insurmountable; they can be produced in every county in the State. They need only proper care and protection. Cherries, quinces and grapes, and many other delicious fruits, can be raised in every garden in the State. This subject is interesting, he said, not to the farmer only, but to all classes who have a plot of ground big enough to give root to a fruit tree. Hence the importance of having the subject more fully understood, and hence also the need of agricultural education; for to cultivate fruit successfully, more knowledge is needed than to pursue the ordinary duties of the farm. Few of our farmers are well informed upon this subject; and they will never be informed upon it, until some different measures are taken to instruct them. Every boy should be instructed in the operations of the cultivation of fruit, as much as in the rules of arithmetic and geography.

Mr. Buckminster said we have not enough fruit. Prices are much higher than they were twenty years ago; twenty-five years ago good apples could be bought for 75 cents a barrel, since then the price has been rising, and this, he said shows that we do not raise enough. He thought our latitude the best of any for the cultivation of the best of fruit. The currant, strawberry and cranberry, he said, could be well cultivated here, but go either north or south three degrees, and these fruits are not so good. We get richer peaches here, than they do south. There is no difficulty in raising them on the high grounds in the vicinity of Boston. He thought Lord Coke made a mistake, when he said that taking an apple from a tree was not theft, because it was a part of the real estate, and real estate cannot be stolen. One error of farmers, he said, was setting trees too deep; another was, in setting them in grass ground—which should never be done. The tree should not stand on a hollow place,where the water will stand about it; trees on side hills do best. The ground should be well cultivated, and kept well cultivated, while the trees are young. Fruit can be obtained from the Baldwin in four years from the bud, by proper culture.

Mr. Pomeroy, from Southampton, spoke of his experience in raising fruit. He believed that we can raise some of the choicest fruit in our State. In order to get good fruit we must have good trees.

He believed it to be neither humanity or economy to deprive a fruit tree of the nourishment which it needs. Peaches with him had been the most profitable crop—the crop had never failed. His first trees he got from New Jersey, but he found them to be no better, if as good, as those he could get here. He fenced in a piece of land as a henery, and set out his trees there, and found they would grow about twice as fast as those outside the henery, and the fruit was much better. He plows the henery in the spring, and the fowls keep it light the rest of the season. The object in having the trees in the henery was to allow fowls to destroy the borer and curculio. The "President" peach he considered his best peach. He has to shorten his trees in, every year, they grow so fast. By shortening in trees which bore a late and inferior fruit, he had got a good fruit, and in good season. Apples do not do so well in his section, except early apples. The Legislature was providing a law against stealing fruit, which he hoped would remedy the evil to which the president alluded.

Maj. WHEELER, of Framingham, thought the fruit culture to be the most important and profitable of any. Instead of diminishing, the prices have been increasing the past thirty years. We do not raise half enough for our own consumption. We live in one of the very best climates to raise fruit. When we see that we do not raise enough for our own consumption, and that new markets are constantly opening, there is no fear of over supplying the demand. He contended that peaches might be sent to England and sold at enormous prices. Apples can be sent to the East Indies. We have much soil that is calculated for peaches, and we can raise them with more surety than they can at the South. They are not so liable here to be cut off by the late frosts in the spring. There are farms in Framingham where the peach has not failed for thirty years—while on others they fail three times in four years. They should be set upon high ground. He had examined many trees since the recent cold weather, and found that the buds were destroyed. Still he thought there was enough left to give us a good crop. He recommended cutting in every year—and then picking off a large proportion of the fruit, so as to raise that which is of a superior character. It is important to raise the best fruit—and it will always bring the largest price. The pear has been much neglected. He thought it could be cultivated to advantage and profit.

Hon. JOHN C. GRAY, of Boston, agreed that it was not good policy to plant trees in grass-ground. He asked for information, what we are to do when our trees grow too fast. If the ground is kept up, the branches of the trees in a few years will meet. He thought when trees are ten or twelve years old, the ground may be put down to grass. Apple trees ought to be set 40 feet apart. He thought the peach was an uncertain crop in our State; such was his experience. He found it necessary to put out a dozen or two young trees a year in order to keep his crop full. The changes of our climate he thought to be the great source of failure of the peach crop. He agreed with others in the advantage of cutting in the trees. The old baking pears he thought to be hardy and easy of culture—the Iron pear and the Bartlett, for instance—while the Seckle and others were hard to raise. The pear tree he thought to be tender of drought; they are effected more by our long summer droughts than our cold winters. The apple he thought to be a standard fruit, and he was not aware of any better apple orchards in the world than the New England apple orchards. We have a climate which raises as many varieties of fruit as any climate in the temperate zone. The peach he considered a tolerably certain fruit on high grounds.

The CHAIRMAN inquired of Mr. Gray in regard to the treatment of the yellows.

Mr. GRAY considered the disease incurable, and advised getting the trees out of the way as soon as possible.

Maj. WHEELER recommended as a cure for the borer on peach trees, the application of a strong ley—say one pound of potash to four quarts of water. He believed with Mr. Gray that there is no cure for the yellows. One application of the ley in August he thought would be effectual for the borer.

Mr. BUCKMINSTER said there was a difference between the apple tree borer and the peach tree borer. Their habits are different. If the farmer places strong wood ashes around the roots of the peach tree in the spring it will prevent trouble from these insects.

Maj. WHEELER had tried ashes, lime and tan, and found them of no effect. The worms will go in above the ashes. He did not consider them a reliable preventive. He thought the wash would kill all the young ones and the eggs. The gentleman spoke further upon the culture of apples. There had been much neglect in setting out orchards. Soils, when they are set out, are not generally dug deep enough. The hole for apple trees never ought to be less than two feet deep and six feet across. Another trouble is that people do not get good trees. They ought not to be set out until four years from the bud. The nurserymen do not trim and shape the trees as they ought to, before they leave the nursery.

Mr. SHELDON, of Wilmington, said he should choose a sandy, loamy soil, where no water could stand, for his nursery. He would have the rows four or five feet apart. When the trees are small, it is a good plan to sift ashes over them in damp weather. When they are big enough to bud, it is a good plan to cover the ground with grass from a meadow; it will prevent damage from the

drought. One, two and three years are the best times to take them from the nursery. They should be taken up with a sharp spade. The tap root should be cut off before the tree is removed. They should be taken up early in the spring, and if the ground is not ready for them, cover the roots in ground until it is. They should be set out the same depth as they stand in the nursery. It is a good plan to sift soil from the corn field or garden among the roots. He also approved of washing trees with soap suds and ashes. In trimming, great care should be taken to balance the tree aright. He thought it needed a hard-hearted man to trim an orchard. A good tree set one year is worth a dollar; it will increase a dollar a year for the next nine years, and in the next twenty years it will pay the interest of that ten dollars and the principal also. Large limbs should be cut off in August. This is a better time than in June. He related an incident to illustrate that no man is too old to set out trees. To the nurseryman he would say, never cheat in the name of your trees, and to the farmer he would say, never set out an orchard until you are ready to take care of it.

It was then moved that the same subject be continued next week, and that the time of meeting be changed to half-past seven. Hon. MARSHALL P. WILDER, it is expected, will preside at the next meeting.

For the New England Farmer.

ONION MAGGOT.

MESSRS. EDITORS:—Our onions were nearly all destroyed in this section last season by the *white maggot*, which I have seen mentioned in your periodical some years since.

I would inquire whether any remedy has been discovered to your knowledge that proves effectual.

Yours, &c., IRA BROWN.

New Haven, Feb. 19, 1852.

REMARKS.—See remarks upon another communication making similar inquiries. Use ashes and well-rotted manure freely, and we think you will get good onions.

A REMARKABLE HEN.—A gentleman of our acquaintance, in marketing a day or dwo since, bought from a wagon a hen of ordinary size and appearance, but the great weight of which excited his curiosity, and upon having it killed and cleaned, a remarkable fact was disclosed, and its extraordinary weight accounted for—the creature was found to contain *twenty-five eggs*, eighteen of which were of full size, with yolks and whites, although their shells were still soft; the remaining eight were of a yellow color, and varied in size from that of a hickory nut to that of a cherry. This remarkable bird was purchased in the Charleston market from Mr. Bradley, the keeper of the Four Mile House, near this city, and has been returned to his hands for the inspection of his customers and the curious in such matters.—*Charleston, S. C., News.*

GRAFTING WAX ON COTTON CLOTH.

To the Editor of the Whig and Courier.

Inquiries are frequently made for the best grafting wax and the recipe for making it. I have procured the recipe for the best article I have ever seen, which was three years since invented by Maj. Chapman of this city, which he uses in grafting in his nursery with good and almost sure success. I have used it two years and find it valuable; for it is very pliable, easily worked, and it contains nothing that in the least injures the scion or stock.

It should be made precise according to the following proportions.

RECIPE.

6 lbs. Beeswax; 1 lb. Rosin; 1 pint Linseed Oil. (No other oil than linseed should be used.) Melt them well together over a slow fire. Then with a paint brush, spread the wax thinly while warm, on one side of thin but closely woven cotton cloth. Cut the cloth when waxed (lengthwise, as the warp is the strongest) into strips as may be wanted—say half an inch wide and about 9 inches long—according to the size of the stock to be grafted.

Grafting can be worked with these strips very readily, as no strings are necessary, and may be very neatly as well as quickly performed.

These wax strips may also be used in budding trees. That the public may be better accommodated I will try to keep a supply of the above grafting cloth in our store for those who do not wish to make it for their own use.

I would again remind our citizens that to insure success, all *stone* fruits should be grafted before the frost is out of the ground, or as early afterwards as possible. Respectfully,

HENRY LITTLE.

COTTON FROM STRAW.—A circumstance extremely interesting to all engaged in textile manufactures, indeed to the whole community, has this week been communicated to us. An amateur chemist of this town, while engaged recently in testing the Chevalier Claussen's chemical process of making cotton, not having any flax straw at hand, tried it upon oat straw. To his astonishment, after the silica and gums which enter into the composition of oat straw in greater proportions than in flax, had been dissolved, he obtained a large quantity of good cotton. The opinion he formed from this and subsequent experiments is, that the common straws of this country may be profitably converted into cotton, thereby adding to the certainty and abundance of our future supplies. At any rate, the experiment is one which is worth testing to the fullest extent, and the hint here thrown out will no doubt induce persons most favorably situated for pursuing an investigation with advantage at once to undertake the task.—*Nottingham paper.*

EFFECTS OF IRRIGATION.—Water applied to the soil by irrigation gives many other things beside humidity; it manures, consolidates, deepens the staple, or surface mould, and guards against cold—effects as obvious in a northern, as in a southern climate.

☞ Mr. Oliver Clark, of Southampton, killed some fowls recently, and found in the gizzard of one of them, two five-cent pieces. Biddy had perhaps become imbued with the money-getting spirit of the age.

For the New England Farmer.

ORIGIN OF WOODPECKER APPLES.

BY SILAS BROWN.

Messrs. Editors:—I supposed the question in regard to the native place of the original tree which produced the Woodpecker or Baldwin apples, as they were called, had been laid at rest years ago; but latterly several towns have laid claim to the honor of growing the tree which has furnished New England with one of the best varieties of winter apples carried into market. Doct. John B. Brown, of Boston, (a native of Wilmington,) published a history of the tree and its location some 20 years ago, I believe in the *N. E. Farmer* of that day. In vol. 10, No. 22, of the *Boston Cultivator*, may be found an imperfect sketch of its history in answer to the claim of Tewksbury in a communication written by Doct. Rufus Kittridge, of Portsmouth. In vol. 7, No. 6 of the *N. E. Farmer*, Mr. Fowler says, "that it acquired this last name in consequence of its having originated on the farm of a Mr. Butters, situated in the town of Somerville, in the County of Middlesex." If Mr. Fowler had substituted Wilmington instead of Somerville, I believe all would have been correct, except the construction of the monument, which I never heard of before. The genuine Woodpecker apple is described by Mr. Cole as the late Baldwin; he says, "the late Baldwin is only a modification of the Baldwin, by what means is not known. It is a few weeks later, is much harder, is more flat, more of a crimson color." There is strong evidence that several varieties of apples have currency under the name of Baldwin apples; how it should happen that there should be late Baldwins, and early Baldwins, both originating from the same tree, is somewhat puzzling to my physiology.

Mr. Simeon Butters, a grandson of William Butters, the man that "planted the tree," is now 72 years old, and can remember when his grandfather died; he lives but a short distance from where the old Woodpecker tree flourished and died. I have taken such an interest for the honor of the two towns which produced the extraordinary tree as to send a "special messenger" to Mr. S. Butters, who is an intelligent man with undecayed intellects, for his certificate containing all the facts he was able to state in relation to the tree and its original proprietors. It appears that Woodhill, in Burlington, has the honor of raising and nursing the infant tree till it was large enough to transplant, then William Butters transplanted it on the Wilmington side of the boundary line about half a mile. I will here insert Mr. Butters' certificate:

"I, Simeon Butters, do hereby certify that my grandfather, William Butters, owned the original tree which produced the apples since known by the name of Woodpeckers, Baldwin apples and Butters apples; said tree was transplanted from Woodhill, at that time in Woburn, to the southwestern corner of Wilmington, very nigh the boundary line of the second parish in Woburn, since incorporated into the town of Burlington, and that the tree took its name from the woodpeckers, which were very fond of picking it. My grandfather died about 1783, a very aged man. The tree that produced the woodpeckers, I well remember; it has been done bearing about 30 years. My father, James Butters, has told me repeatedly, and told me not a year before he died, that Col. Baldwin got grafts from the Woodpecker tree on his farm. My father, James Butters, died in his 97th year; my father had no knowledge of grafting, nor ever grafted a tree, as far as I knew. Simeon Butters."

It appears that S. Butters was 42 years old when the Woodpecker tree left off bearing; he was probably indebted to James Butters, his father, principally for the facts stated in his certificate, as his grandfather died when he was in his fifth year. He said his father was very much incensed at those who called his favorite apples "Baldwin apples," and put the question, why do you not call them Woodpeckers? He further stated that the original Woodpecker apples were very red, and much flatter than many of the apples called Baldwins now-a-days; and to use his own expression, shaped more like an English turnip. As we have depended in part on tradition in the above history, I think Mr. Butters' statement may be relied upon in every important particular. The time has gone by and it is too late to collect unrecorded occurrences and facts which took place the last century. S. B.

Wilmington, Feb. 27, 1852.

For the New England Farmer.

THE BALDWIN APPLE.

BY S. P. FOWLER.

Mr. Brown:—I noticed in your last paper some doubts raised by my friend P. in regard to the account I gave of the origin of the Baldwin apple tree. The information upon this subject was obtained from Downing's *Horticulturist* for the year 1847, in the following article, found on page 315, and entitled, "Account of the origin of the Baldwin Apple, by B. V. French, Vice President of the Mass. Hort. Society."

"This justly esteemed fruit originated in Wilmington, near Boston, in that part which now makes a portion of the new town of Somerville, in the county of Middlesex, Massachusetts. The original tree grew on the farm of a Mr. Butters, and was known for a time as the Butters apple. This tree was frequented and pecked by the woodpeckers, and Mr. Butters called it the Woodpecker apple, which was soon abbreviated to the Pecker apple. My trees, which I set out twenty-eight years since, are registered 'Peckers.' This fruit must have been known about a century. Orchards were propagated from Mr. Butters' tree, pretty freely, about seventy-five years since, by Dr. Jabez Brown, of Wilmington, and Col. Baldwin, of Woburn, and their sons, to whom the public are principally indebted for bringing the fruit so generally into notice. From Col. B. and his family, who introduced it largely into public notice, it took the name of 'Baldwin,' by which the fruit is now every where known. I am informed that Maj. Samuel Jaques, of Somerville, eminent as an agriculturist, breeder and horticulturist, as well as a public benefactor of his age, now owns that part of the farm on which the original Baldwin tree grew, and has placed a monument on the site where it once flourished."

Such is Mr. French's account of the origin of the Baldwin apple tree. We have always understood that the tree under consideration did not originate with Col. Baldwin, but was brought by him into notice, and it received his name. I find in the old fruit books, published thirty years since, it is called the Baldwin apple, or Pecker apple.—Probably something might be found in regard to the origin of this apple, in some of the volumes of the old *New England Farmer*.

Mr. Proctor says the Fall Harvey originated on the same farm with the Danvers Sweeting. In a conversation with the elder Mr. Manning, some years previous to his death, upon the subject of the origin of this fine apple, he said he thought it originated somewhere in Essex county, but he could not trace it to any particular town. We have always supposed that it might have originated in Danvers, from the fact of its having been known there during a period of nearly one hundred years. Mr. Manning says in his fruit book, it is without question the finest fall and early winter apple, a good bearer, and deserving extensive cultivation. Yours, &c.,

Danvers, Feb. 22. S. P. FOWLER.

P. S. — I have ascertained since the above was written, that there must be some mistake in Mr. French's account of the origin of the Baldwin, which I copied from the *Horticulturist*. Mr. F. says it originated in Wilmington, near Boston, in that part which now makes a portion of the new town of Somerville. Now in point of fact, the town of Wilmington, in our maps of Massachusetts, is several miles distant from the town of Somerville.

For the New England Farmer.

FARM SCHOOLS.

BY JOHN GOLDSBURY.

MR. EDITOR:—I am a constant reader of your interesting and instructive paper. I have read, with much interest, all that has been said in it, upon the subject of *agricultural education;* and I have reflected much upon the different plans which have been proposed for promoting it. To all the plans which have hitherto been proposed, there are insuperable objections in my mind, if I except the plan recently proposed by Mr. H. F. French, of Exeter, N. H., which so nearly accords with my own views upon the subject, that I wish to be indulged with a few remarks upon it. Mr. French's plan of establishing *a model farm school*, located near a sufficient market, with suitable buildings, apparatus, stock, tools, and other appurtenances, to be tried as an experiment in one place, before similar schools are established in other parts of the commonwealth, appears to me to be less objectionable than any other plan with which I am acquainted. It certainly is a simple, practicable, and an economical plan; and I believe, if it were once thoroughly tried, it would prove to be a successful one. This is more than can be truly said of any other plan which has yet been suggested. All other plans appear to be complex, impracticable, and expensive.

Take, for instance, the two plans which now stand the most prominently before the public. One is, to establish in all our colleges, academies and high schools, an agricultural department for the instruction of the young in agriculture. The other is, to have this same instruction given in our common schools. Now, there is no person who is thoroughly acquainted with these different institutions, and knows what is going on in them, but he must see at once, that agriculture would not be successfully taught in either of them; in other words, it would not be successfully learned. So that, after the expenditure of vast sums of money, there would be an entire failure in the end.

This is true of the higher institutions for various reasons. Some of these I will mention:—

1. Because our young men go to college, not for the purpose of learning the science of agriculture, but to qualify themselves for some of the different professions.

2. Because the other college studies, duties and attractions, would take up so much of their time, as to leave them but little for agricultural pursuits.

3. Because none but the most wealthy farmers would feel themselves able to send their sons to so expensive institutions.

4. Because a great many farmers, entertaining a strong and decided prejudice against these higher institutions, and believing that a kind of antagonism exists between them and common schools, would never send their sons there to be educated, if they could. The same is true of common schools. Agriculture could never be successfully taught or learned in them. The reasons are obvious. Most of the scholars that attend our common schools are quite too young to understand scientific lectures on chemistry, the different kinds of soil, the composting of manures,—on natural philosophy, natural history, veterinary medicine and surgery, &c. They are not only too young to understand these studies, but, as yet, they are quite too ignorant to have their attention profitably directed to them. Scientific lectures to them would be something like scientific lectures to a foreigner, who does not understand a word of our language. They must first learn to read, write, spell, &c., before they attend to scientific lectures. Our schools are already burdened with too many studies; our scholars have a general smattering idea of almost everything, but do not *thoroughly* understand anything; so that, the effect of introducing the study of agriculture would be worse than useless. Besides, who, and how many, are to be employed in giving these scientific lectures in all our public schools? and at whose or what expense? J. G.

Warwick, Feb. 9, 1852.

For the New England Farmer.

THE BALDWIN APPLE.

MR. BROWN:—I have ascertained from an intelligent observer of facts in Wilmington, county of Middlesex, that he knows the position in which the tree that bore the original of this apple formerly stood. It was on a farm owned by James Butters, of Wilmington, near the boundary between Wilmington and Burlington. About twenty-five years since, Mr. Butters himself showed him the place in which it stood; and, said he, the hollow, from which the stump was removed, is now distinctly to be seen.

About five years since a statement was made in the *Horticulturist* that this tree originated on the farm of Col. Jaques, of Somerville, and hence the mistaken position of the tree. Col. Jaques is a native of Wilmington,—whether he owns the ground on which Col. Baldwin first noticed the tree, I cannot say;—but that this is the true position of its origin, I have no doubt. When first noticed, the tree was distinctly marked by the operations of the woodpecker,—hence the name of Pecker apple. But the name is now well settled as Baldwin. And it seems to be admitted by all, that this apple is equal, if not superior, to any other grown in New England.

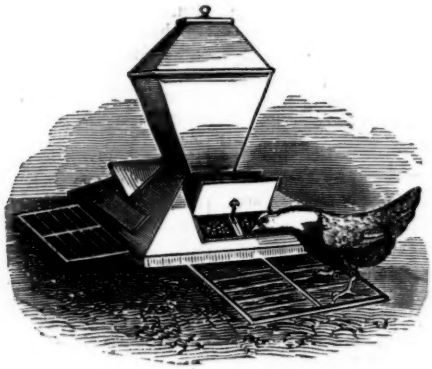
Very truly yours, J. W. PROCTOR.

Danvers, March 10, 1852.

A Fine Treat.—On Saturday, the 6th inst., we received a box of *Isabella grapes* from Mr. W. W. Baxter, of Quincy, which he gathered early in October and packed in cotton. They were placed in boxes which were papered inside, covered closely and kept in a closet where the temperature was three or four degrees above the freezing point through the winter. Those presented us were as fair as ever, finely flavored, but with the slightest evidence that acetous fermentation had just commenced. Nothing can be more grateful than this delicious fruit as a winter dessert.

The Potato Rot.—*Another Preventive.*—Plant your potatoes in the usual way, and when the sprouts appear above ground, take from one-half to a bushel of dry wood ashes, per acre, and sow it broadcast over the ground while the dew is on. Repeat the ashes every seventh day until the crop is made—and if proof by actual experiment is to be relied on, your potatoes will be free from rot. —*Rural New Yorker.*

☞ To prevent oxen from crowding, it is only necessary to lengthen the yoke, often, in extreme cases from 12 to 18 inches longer than those usually worn.



BROWN'S POULTRY FEEDER.

The above engraving represents a poultry feeder which we contrived and made, and have had in use for the last year. It answers the desired purpose admirably. One or two bushels of corn may be fed at once, and thus relieve the mind for weeks of that care. It has four sides, only two of which are represented in the cut, and they afford room for twenty fowls to feed at once. It may be partitioned inside so as to feed different kinds of grain at each opening. It is not well to mix different grains in the same apartment, as the fowls are quite likely to scatter it about; but where there is only a single kind in the apartment it is rare to find a grain on the floor about the feeder.

We used to find considerable destruction to our grain from rats and mice and especially from neighboring doves in open feeding, but this contrivance has proved a remedy for any annoyance. The grain is kept free from dirt and dampness and the fowls seem to enjoy opening it fifty times a day and taking a kernel or two at a time.

Nothing more is necessary to teach the fowls to open it than to raise the doors half an inch just so as to enable them to see the grain. Various forms may be given so as to make it highly ornamental to the poultry house, or it may be constructed in the most cheap and simple manner and still answer the purpose of a feeder.

Where there are some thirty or forty fowls they make a most cheerful clatter for an hour about the time of sunrising, by bringing the door back against the stop-board. The feeder from which the cut was drawn may be seen for a few days, at the warehouse of Messrs. Ruggles, Nourse, Mason & Co., where any person desirous of seeing it is invited to call.

For the New England Farmer.

WHAT COW SHALL I KEEP?

Mr. Brown:—I wish to keep one cow, therefore I want a good one, and before applying to those that advertise blood stock, I wish your advice as to which kind of blood cows are best for milkers, as that would be the first point in my case. I wish to know how much milk one would be likely to average through the year, with good keeping; say one from five to seven years old; and how long they generally go dry, and about what one can be bought for? with calf by a blood bull. Please answer these inquiries as soon as is convenient, and oblige yours, &c., James Thompson.

Nantucket, Feb. 26, 1852.

Remarks.—A good Alderney cow would probably be the best where the milk is required only for family use—say milk for breadmaking, for the table, with cream for the pitcher and for an occasional churning. But Alderneys are at present high and scarce, and some other breed may be found which will answer the purpose. Select a native cow four years old, with small limbs, a neck somewhat slender, lean head, small nose and tail, with a well developed bag, reaching considerably forward, and with good sized teats. A middling

sized animal with a bright, lively countenance, but at the same time gentle. Feed her upon upland hay where a ton or a ton and a half to the acre is cut, and give her the slops of the family mixed with a quart of sweet shorts twice a day, and she will probably yield you an average of four quarts of milk a day for the year. When she is six years old, if kept in the manner described, she may yield you an average of six quarts a day for four years. She ought not to go dry more than three or four weeks.

Such a cow will sell for forty dollars, quick, in most of the towns in this vicinity.

You can form no reliable opinion by inquiring, as to what breed is best for milking qualities. One will tell you the Ayrshire, another the Durham, a third the Devon, and a fourth our native breed. The point is not settled as to what breed is best for milk.

NINTH AGRICULTURAL MEETING,

At the State House, March 16, 1852.

Subject—*The cultivation and preservation of Fruit.*

Hon. Marshall P. Wilder presided at the meeting on Tuesday evening. On taking the chair, he said that he regretted his inability to be present at the last meeting. He concurred in the sentiments then expressed, as he saw them reported in the papers, in regard to the feasibility and capability of our country for the growth of fruit, and also to the profitable character of the crop, and the necessity of a thorough pulverization of the soil, for its successful culture. He then entered upon a consideration of the subject before the meeting, and as his remarks were prepared with much care, and embody the experience of one of our most extensive and successful fruit growers, we feel that we can do our readers no greater favor than to lay before them his address in full. He said—

There are three considerations which are absolutely necessary to the successful cultivation of fruit trees, viz.:

The appropriate soil and location;
The proper preparation of the soil; and
The judicious selection of varieties.

By the appropriate soil, and location, is meant that which is naturally suited to any particular class of fruits. Nearly all our fruits will succeed in a deep mellow loam, but the cherry, the peach, and even some kinds of the apple, will flourish on a soil where the pear will survive but for a short time. Some varieties require a warm soil and southern exposure; others will succeed with a northern aspect, and under less genial influences. Some prosper in the Eastern, Middle and Western States; others only in one of these regions. But the subject of soils and location occupies so wide a field of research, that we cannot enter upon it at length during this discussion.

In relation to *the proper preparation of the soil,* all intelligent cultivators agree that thorough subsoiling, or trenching, is not only the most judicious system, but in reality the most economical, in the end. The first great principle, however, to be attended to, is complete and perfect drainage; for wherever water is permitted to remain, no tree can long continue in health. Stagnant water is as injurious to vegetable life, as the miasma and malaria of pools and marshes to animal life. The drainage must not only be perfect, but its depth must be such as to prevent entirely the roots from reaching beyond it in search of food. This being accomplished, the soil should be thoroughly worked with manure to the depth of 15 inches at least; and if trenched, the upper soil should be placed at the bottom, and the lower soil on the surface, where it will become disintegrated and prepared by the influences of the atmosphere as food, or can be enriched, as necessity may require. Under such circumstances, the roots of trees will have room to search for nutrition, as wanted, and the loose and friable condition of the soil will enable the atmosphere to permeate through it, and the rains to percolate, and pass off, when too profuse, into the drainage, so that no water can ever remain to injure the roots, the disastrous effects of which on trees are everywhere visible in low moist lands.

For the want of the proper location and prepation of the soil, I am of opinion that more than one-half of all the fruit trees which have been planted in New England for the last twenty-five years, have either died out, or have failed to produce vigorous and durable subjects; and I hesitate not to express as my belief, that those which have survived would, with the requisitions above-named and care in transplanting, have attained double their present size and productiveness. Without a compliance with these principles, our advice would be not to plant, and thus save both time and money.

We cannot refrain also from alluding to the great care which is requisite in the removal of trees from the nursery. Of all careless things done in the way of cultivation, nothing is more to be censured than the barbarous manner with which trees are too frequently raised, or rather stripped out by main force without digging, thus destroying not only the small, tender roots, but splitting and mutilating the main ones. I rejoice in the belief that this practice is less common than formerly, and that it has in some of our best nurseries been reformed altogether.

Now it is principally on the young fibrous roots that newly transplanted trees must depend for receiving nourishment, and just in proportion as these have been destroyed will be the development of new wood, and the ratio of its growth; for every branch has its correlative in the root, and wherever a tree has been deprived of its roots, the

branches must be reduced in proportion, or it will take a long time before equilibrium can be restored and vigorous and healthy action again resumed.

The same injurious consequences will result from crowding and doubling back the roots of a tree into a hole just large enough to contain them, or from deep planting—for roots, like human beings, delight in the healthful influence of light and air. Trees should therefore be planted shallow, and we have met with good success where they were planted nearly on the surface and soil brought to cover them. For newly transplanted trees, nothing is more beneficial than mulching the roots during the hot summer months. This may be done with coarse litter, refuse hay, or any substance which will shade the ground, and allow the rains to pass through. Under this treatment trees will thrive better, the size and beauty of the fruit is thereby much increased, and the roots encouraged to the surface, where they can assimilate the aliment which is indispensable to health and fruitfulness.

As to the *judicious selection of varieties*, I have to remark, that the only safe course is to choose such sorts, and *only such*, as by uniformity of character in various localities, particularly our own, have proved to be hardy, productive, and of good quality. Experience has shown that many kinds which have been highly lauded in the catalogues of the day, are not suited to our region, whatever may have been their excellence in other places. More than three-fourths of all the foreign varieties which have been introduced within the last thirty years, are unworthy of cultivation, or are not adapted to our location. Much disappointment has therefore been experienced from this source, as well as from selecting varieties which have no other excellence than a fanciful or crack-jaw name. To remedy this evil, and to diffuse correct information on this point, I have, in compliance with frequent solicitations, prepared a list of approved varieties in the various classes of fruits. In submitting this list, I have regarded the combined character of both the tree and the fruit; for instance, the health, vigor and fruitfulness of the one, and the flavor, size and beauty of the other. But I do not pretend that each of these varieties combines all these excellencies. Seldom is this true of any one sort, but I believe, from the experience of a long course of years, that the following classifications will be found well adapted to our locality.

APPLES.

For three sorts:
Large Early Bough,
Gravenstien,
Baldwin.
For six sorts, add:
Red Astrachan,
Porter,
R ode Island Greening.
For twelve sorts, add.
Early Harvest,
Williams,
Minister,
Fameuse,
Hubbardston Nonsuch,
Roxbury Russet.
For Winter Sweet Apples:
Seaver Sweet,
Danvers Winter Sweet,
Tolman's Sweet,
Lyman Sweet.
For new sorts of high reputation, but not yet fully proved in this region:
Northern Spy,
Ladies' Sweeting,
Melon,
Hawley,
Wagener.

Our country abounds in native varieties of apples, which are superior to most foreign sorts.—Our list might be extended and perhaps hereafter improved.

PEARS.

For three varieties:
Bartlett,
Vicar of Winkfield,
Beurre d'Aremberg.
For six varieties, add:
Bloodgood,
Louis Bonne de Jersey,
Golden Beurre of Bilboa.
For twelve varieties, add:
Andrews,
Belle Lucrative,
Seckel,
Flemish Beauty,
Urbaniste,
Glout Morceau.
For twenty-four varieties, add:
Jargonelle,
Dearborn's Seedling,
Beurre d'Amalis,
Tyson,
Buffum,
Dunmore,
Long Green,
Duchesse d'Angouleme,
Beurre Diel,
Fulton,
Winter Nelis,
Easter Beurre,
Varieties for Orchard Culture:
Jargonelle,
Bartlett,
Golden Beurre of Bilboa,
Vicar of Winkfield,
Fulton,
Buffum,
Urbaniste,
Beurre d'Aremberg.
New varieties of Foreign origin partially proved, and which promise well:
Doyenne Bossouch,
Smith's Bordenave,
Figue,
Paradise d'Automne,
Beurre d'Anjou,
Nouveau Poiteau,
Beurre Langlier,
Van Assene,
Soldat Labourer,
Triomphe de Jodoigne,
Duchesse d'Orleans,
Jalousie de Fontenay,
Doyenne gris d'hiver—new.
New American varieties of good promise:
Westcott,
Pratt,
Chancellor,
Sheldon,
Brandywine,
Onondaga,
Howell,
Ott,
Collins,
Kinsessing.

PEACHES.

For three sorts:
Early York, (serrated foliage,)
Crawford's early,
Old Mixon Free.
For six sorts, add:
Large Early York,
George Fourth,
Crawford's Late.
For twelve sorts, add:
Grosse Mignonne,
Bergen's Yellow,
Druid Hill,
Late Admirable,
Yellow Rareripe,
Heath Free Stone.

PLUMS.

For three sorts:
Green Gage,
Jefferson,
McLaughlin.
For six sorts, add:
River's Favorite,
Lawrence's Gage,
Purple Gage.
For twelve sorts, add
Reine Claude de Bavay,
Bleeker's Gage,
Imperial Gage,
Smith's Orleans,
St. Martin Quetsche.
Yellow Gage.

CHERRIES.

For three sorts:
May Duke,
Black Tartarian,
Downer's Late.
For six sorts, add:
Belle d'Orleans,
Black Eagle,
White Bigarreau.
For twelve sorts, add:
Elton,
Downton,
Late Duke,
Knight's Early Black,
Sweet Montmorency,
Sparhawk's Honey.

Pears on the Quince Stock.—Much attention has been given of late years to the cultivation of the pear on the quince stock, and in relation to which I have been requested to give the results of my experience. As a general rule, no tree will succeed for any great length of time where it is grafted on any other than its own species. There are, however, exceptions to this rule, and among them, some varieties of the pear, which grow vigorously, bear abundantly, and which seem to be

even better adapted to the quince, than to their own root.

An impression has extensively prevailed unfavorable to the cultivation of the pear on the quince. This has arisen principally from an improper selection of kinds, or from injudicious cultivation.—There are, however, three considerations which are absolutely necessary to success, viz., a deep, rich soil,—the planting of the quince stock entirely below the surface of the ground,—and a systematic and scientific course of pruning, as the tree progresses in growth.

Objections to this species of cultivation have been made from the belief that the quince was a short-lived tree, and that the crop must necessarily be small from what are termed dwarf trees.—Such, however, has not been my experience. On the contrary, I have pear trees on the quince root which are twenty-five years old, and which produce annually a barrel or more of fruit each, and for aught that I can see, they are destined to survive as long as any that I possess on the pear root. These may, and probably have in some instances, thrown out roots from the pear stock, but whether this be so, or not, instances are not rare where such trees have attained in France the age of more than a hundred years, and we know of a quince tree in Massachusetts which is 40 years old, and which has produced 10 bushels of fruit in a season.

The pear, when grown on the quince, should always be trained in the pyramidal form. These may be planted in much closer order than when grown as standards. We have known them to succeed well where grown at the distance of 6 feet apart in the rows and 12 feet between the rows. In this way Mr. Rivers, the great English cultivator, planted 2500 Louise Bonne de Jerseys and 1500 Glout Morceaus for the London market. We consider 12 feet apart, each way, a liberal distance. This would give 302 trees to the acre, and we are clearly of the opinion, that soil and selection of varieties being right, no crop whatever would be more profitable. Such a plantation, with proper care, would yield, in the fifth year, from 75 to 100 bushels of fine fruit. As to profit, this will not appear as an exaggeration, when it is known that Glout Morceau pears, a variety which succeeds admirably on the quince, have sold during the winter readily at one to two dollars per dozen, in our market.

We name as varieties which succeed well on the quince the following, and to which might be added many more:

Louis Bonne de Jersey,	Belle et Bonne,
Vicar of Winkfield,	Beurre d'Anjou,
Duchess d'Angouleme,	Beurre Diel,
Glout Morceau,	Easter Beurre,
Passe Colmar,	Beurre d'Amaulis.
Urbaniste,	

There are many other topics which relate to the successful cultivation of fruits, on which I should be happy to address the meeting, did the time allotted to the chair, or my personal health or strength permit; such, for instance, as the *appropriate manures, scientific pruning, diseases of trees, and the importance of raising new varieties from seed which shall be perfectly adapted to our region.*

We must, however, confine our remarks to the other part of our subject,—

The Preservation of Fruits. — This is as important as any of the topics which have engaged our attention, for although the cultivator may be blessed with an abundant harvest, yet without a knowledge of the art of preserving his crop for future use, much of his labor would be unavailing. For the want of proper care in gathering and keeping our crops of fruit, it is estimated that one-third is annually lost, or materially injured in value.

Few persons are aware of the great care which is requisite in the *gathering of fruits*, and unless this part is well done, and done at the proper time, all future efforts for its preservation will be unsuccessful.

As a general rule, with regard to apples and pears, they should be gathered a few days before maturity. By this means, even summer varieties may be preserved for weeks, if stored in a properly constructed room. The flavor is also improved, and they may be kept for a much longer time than when left to ripen on the tree. They should never be permitted to remain after the tree commences to drop its foliage, because the flavor will be impaired, after vegetation has ceased to perform its office.

Apples and pears should be picked by the hand, and in a clear, dry day, for, whenever an injury takes place by bruising, although it be but an indentation by the thumb, there decay surely and soonest ensues.

So important is the process of gathering deemed by one of the largest exporters of apples to Europe, that he never allows a specimen to be packed which has an imperfection. Nor does the care cease here. The barrels are either carried on the shoulder, or on hand barrows to the vessel, by which they are to be shipped. They consequently arrive in sound condition and command from $6 to $9 per barrel in Liverpool. The necessity of this system has been fully tested by the fact, that apples which had been pressed by the thumb as an experiment, were found to be in a partial state of decay, and would bring only one-third, or half price, of sound ones.

For the long keeping of fruits, a properly constructed room is an indispensable condition.—Some fruits, particularly winter apples, may be kept for months with ordinary care. This our farmers understand pretty well, by keeping them in cool, dry cellars; but the preservation of the more tender varieties, and especially the pear, is attended with greater difficulty.

The principal prerequisite is a room where per-

fect command may be had of the temperature. For this purpose it must be constructed so as to admit, or exclude, the external atmosphere, as circumstances shall require.

A very satisfactory experiment was made many years since at Paris, which is fully described in the Transactions of the Massachusetts Horticultural Society. By this method many thousands of pears and apples were preserved until the month of June, and for which the Royal Horticultural Society awarded a special medal. The room was constructed with exterior and interior walls, with a space of about three feet between them, or, in fact, *a room within a room.*

These fruits were placed in drawers, in single layers, and nearly covered with powdered charcoal and sawdust, care having been taken previously to allow the fruit to pass through what is usually called the sweating process. This is, however, only the deposition of dew or moisture occasioned by the cooling off of the fruit to the temperature of the room, and during which, if piled in large heaps, or packed in close boxes, injury is sure to ensue.

Much attention has been given of late to the construction of fruit rooms, several plans having been recently published, all of which are based on the principles here laid down, viz.:—*perfect command of the temperature, and exclusion of moisture.*

An account of one of these rooms with double walls was given in the *Revue Horticole.* It has since been translated into the *Gardener's and Farmer's Journal,* and appears in *Hovey's Magazine of Horticulture* for this month.

This plan differs but little from the one to which I have alluded, except that the walls here are filled in with moss 18 inches thick, and to absorb any excess of moisture, a box of chloride of calcium is placed on a table in the centre of the room. This we think may be an improvement—for a proper hygrometric state of the atmosphere is as necessary to be preserved as the state of the temperature. What particular degree of moisture is required to keep fruit from shrivelling, we have not yet ascertained, and we think that probably different fruits, according to the texture of the skin would require different hygrometric states.

The London *Gardener's Chronicle* for last Nov. contains drawings and descriptions of a fruit room constructed by a Mr. Moorman on a similar plan, except that his building has single walls with a space of but a few inches between them, and in which he was able to keep the autumnal pears, such as Marie Louise, into winter. Experiments are also in progress in this city, by which it is hoped that even the more delicate fruits, such as peaches and plums, may be preserved beyond their usual season, or transported to other countries.

Time will not permit me to enlarge on this subject. I will, therefore, confine my remarks more particularly to my own experience.

Having found it impossible after a trial of years to maintain an equable temperature in my fruit cellars, I constructed a room in the north part of my barn, over the carriage house. The walls and roof of this apartment are filled in with fine charcoal and sawdust to the thickness of about 4 inches. There is only one window, which faces to the north, and this is furnished with double blinds to exclude the light, as well as the external air. The room is arranged with shelves about 4 feet wide, and upon which the fruit is placed in single layers, never allowing one to rest upon the other.

The fruit being stored, the great object is to maintain a low and uniform temperature, thus holding the ripening process in suspense; for with increased warmth, fermentation would commence, and the fruit mature; or with too low a temperature, it would lose its powers of resuming it. The secret, therefore, is to hold in check this fermentation or ripening process, until the fruit is desired for use, and this can only be secured by perfect command of the temperature. From my own experiments I am of opinion that a temperature of about 40 degrees of Farenheit will accomplish this object. In confirmation of this opinion, I have before me a few specimens of Beurre Diel, Vicar of Winkfield, and other pears, some of which usually ripen in October and November, which it will be seen are not yet in eating condition.

These fruits have had no other care than that of admitting or excluding the external atmosphere to regulate the temperature. They remained on the shelves until after the severe weather of December, when they were packed up in boxes with clean rye straw between each layer, stowed away on one side of the room, and covered up with hay. Of the straw I entertain a favorable opinion, containing, as I suppose, sufficient air in its tubes to prevent moisture, and having a dry silicious coat, not likely to communicate it to the fruit.

From my observations, I entertain no doubt but apples and pears may be kept through the winter and most of the spring months in perfection, by the method we have endeavored to describe, viz., a cool, dry room, with non-conducting walls, and the means of regulating the temperature by the admission or exclusion of the external atmosphere.

This, it is believed, can be more easily accomplished with a northern exposure, and better in an upper room than on the ground floor, or in the cellar, where the heat is continually rising from the earth. [Another method for the preservation of small quantities, and by which fruit may be kept over to the summer months, is to pack it in a box within a box, and to fill the space between with fine charcoal and ground plaster, or plaster and fine salt; either of which will answer the purpose,

if the fruit is put up in cool, dry weather, and stored in a cool room of the same temperature.]

Mr. WILDER closed with some appropriate remarks upon the duty of setting out fruit trees, and mentioned several instances in which persons from 70 to 90 years of age had set out trees and lived to partake of the fruits thereof.

Hon. JOHN C. GRAY said that he believed the French author quoted by the President preferred the admission of the light to its exclusion, in rooms for ripening fruit. He understood the chairman to say that he preferred its exclusion. He wished to ask if he was right in this opinion.

Mr. WILDER replied that he considered the admission of the light not beneficial. By excluding it the fruit attains a more beautiful color.

Hon. B. V. FRENCH, of Braintree, next addressed the meeting, and advocated, as the first matters to be attended to in the cultivation of fruits, thorough draining of the land, and its thorough subdivision. He trenches his ground from 18 to 24 inches deep, and lays drain pipes 24 inches apart. Much depends upon setting out the trees. They should not be set too deep. He had tried setting out on the inverted sod, and out of 400 trees lost but two. If the roots are covered to the depth of an inch it is sufficient. They will work down themselves sufficiently. Mr. French also spoke of the necessity of having the orchard properly enclosed in order to prevent the trees from being injured by the cattle. When cattle rub against them the trees should be immediately washed with ashes and water to remove the grease.

Mr. French is a large cultivator, and the following list, given as the result of his experience and judgment, is deserving the attention of those about setting out fruit trees.

As the best *early* apple, Mr. French recommends the Early Harvest. The best apple is the White Seek-no-further. If he had but one apple tree he would prefer the R. I. Greening. The best sweet apple is the Seaver. For two varieties he recommends the Porter and Rhode Island Greening. For the four best summer varieties, the Harvest, Red Astracan, Williams Favorite, and Summer Pearmain. Four best autumn varieties, Porter, Fomeuse, Gravenstein, and St. Lawrence. Best five winter varieties, R. I. Greening, White Seek-no-further, Baldwin, Roxbury Russet, and True Nonsuch. The best apple for stewing is the Hawthornder.

If he could have but one cherry, it would be Downer's Late Red; the best of all cherries is the Knight's Black Eagle. The earliest cherry that is prolific is the May Duke—the latest, the Late Duke.

The Green Gage he considered the best of plums. If one plum is to be selected, he would prefer Prince's Imperial Gage; for two, add Smith's Orleans; for three, Coe's Golden Drop.

For strawberries, he would prefer Jenny's Seedling, and next to that, Willey's Seedling.

Of currants, which he called the Prince of fruits, he knows of none better than our old Red variety.

He also spoke of the need of caution in selecting trees—not to seize upon every kind which is highly recommended, before it has been fairly tested. In 1831 he said the London Horticultural Society had upon its catalogue 1400 varieties of apples; in 1842, it had reduced the number to 900 varieties, and it would probably be still further reduced. We do not want, he said, more than 30 or 40 varieties. In conclusion, he called the attention of the meeting to the *currant*, which he said he sometimes thought to be the *Prince* of *fruits*. He approved of trimming out the old wood, but would cultivate the plant as a bush rather than a single stem, as is done in the old country. There is no fruit, he said, which requires so high tillage, and so much care, as the pear—and which so well compensates for this care. Unless this high tillage can be given it, there is but little use in attempting to raise pears.

Dr. GARDNER, of Seekonk, said that farmers ought not to be discouraged if they found themselves unable to practice such deep trenching and thorough tillage as had been recommended. They could raise fruit in land less thoroughly tilled, and in grass land—though they might not get so large crops.

In regard to cultivating trees in a henery, as suggested by a gentleman at the previous meeting, Mr. FRENCH said that he had tried it, and found that the hens appropriated the buds to themselves, and he, of course, lost his fruit.

JOHN MILTON EARLE, of Worcester, spoke of Coe's Golden Drop plum, and said that he had had good success in ripening it. When it first came into bearing his success was not so good, but after a year or too, he had no trouble at all; it bears extremely well, and ripens as perfectly as any plum he ever saw. It is a very valuable variety, as it comes in after the plum season is nearly over. Mr. Earle said that in discussing the mode of cultivation of the pear the great diversity in the character of this fruit ought to be taken into consideration. Some varieties will do well with even tolerable orchard cultivation. Still they would do better with high cultivation, of which he approved, and believed it to be cheapest in the end. He differed from the opinion generally entertained—that many of our foreign varieties will never come to anything here. He believed that when their proper mode of culture and ripening is well understood, they will be found to be here all that they are represented abroad. The great trouble is we do not understand their proper mode of culture and process of ripening.

Major WHEELER, of Framingham, spoke in favor of cultivating plum trees in a henery, and con-

sidered this course one of the most effective remedies for the curculio.

Ladies' Department.

DOMESTIC RECIPES.

HAM TO BROIL.—Cut the slices very thin, take off their skin, put them on a gridiron, and over a hot fire, turn them in one minute; two minutes will cook them sufficiently; no seasoning is necessary; serve with piccalilli.

HAM TO FRY.—Cut the slices very thin, take off their skin, put them into a hot spider, and turn them frequently, until a little crisped; be careful not to burn the slices; three minutes will fry them well; serve in a hot dish.

TO MAKE SANDWICHES.—Rub one table spoonful of mustard flour into half a pound of sweet butter; spread this mixture upon thin slices of bread; from a boiled ham, cut very thin slices, and place a slice of ham between two slices of the bread prepared as above; cut the sandwiches in a convenient form, and serve.

Some people chop the trimmings of the boiled ham very fine, and lay them between the slices of prepared bread.

This is a good dish for lunch or evening entertainments.

EXCELLENT SAUSAGE CAKES.—Chop lean pork very finely, having removed all the bone and skin previously, and to every pound of meat add three quarters of a pound of fat bacon, half an ounce of salt, a pinch of pepper, a quarter of a nutmeg, grated, six green onions, chopped finely, and a little chopped parsley; when the whole is well chopped and mixed, put it into a mortar and pound well, finishing with three eggs; then have ready a pig's caul, which cut into pieces large enough to fold a piece of the above preparation, of the size of an egg, which wrap up, keeping the shape of an egg, but rather flattened, and broil very gently over a moderate fire.

THE SECRET.

I noticed, said Franklin, a mechanic among a number of others, at work on a house erecting but a little way from my office, who always appeared to be in a merry humor, who had a kind word and a cheerful smile for every one he met. Let the day be ever so cold, gloomy, or sunless, a happy smile danced like a sunbeam on his cheerful countenance. Meeting him one morning, I asked him to tell me the secret of his constant happy flow of spirits. "No secret, Dr.," he replied; "I have got one of the best of wives, and when I go to work she always has a kind word of encouragement for me, and when I go home, she meets me with a smile and a kiss, and then tea is sure to be ready, and she has done so many little things through the day to please me, that I cannot find it in my heart to speak an unkind word to anybody." What an influence, then, hath woman over the heart of man, to soften it and make it the fountain of cheerful and pure emotions. Speak gently, then,—a happy smile and a kind word of greeting, after the toils of the day are over, costs nothing, and go far toward making a home happy and peaceful.

Mexican Guano.

A NEW ARTICLE is now offered to the Agriculturist and Dealers, under the above name, from its having been found near the Mexican coast. It has been analyzed by C. T. Jackson, M. D., State Assayer, Boston, Dr. David Stewart, of Baltimore, and others. Dr. Stewart says it contains the largest proportion of Phosphates he has ever met with in Guano.

The following are the result of the analysis made by C. T. Jackson, M. D.:

Water	23.40
Vegetable Matter	15.60
Soluble Salts (in Water) Phos. Soda	0.12
Phosphates of Lime and Magnesia	60.50
Insoluble Matter (Selex)	0.10
	99,92

The quality of this Guano as a rich fertilizer, and the great reduction in price compared with the Peruvian, is such as to render it an object for the agriculturist and dealers to buy and give it a trial. It has been tried in the vicinity of Norfolk, Va., and much approved by the Farmers, those who are now buying and using of it freely. It may be obtained in lots to suit purchasers of A. D. WELD, 127 State Street, PHINEAS SPRAGUE & Co, T Wharf, or of P. A. STONE, who is the importer, and may be found at 15 Crescent Place, Boston, where also other information may be obtained respecting it. It is also for sale by Parker & White, 8 and 10 Gerrish Block, Blackstone Street, D. Prouty & Co., 19 North Market Street.

March 27. tf

Country Residence in Milton,

FOR SALE.

This estate, situated near the Blue Hill, 10 miles from Boston, and 1½ from the Reedville Station, on the Providence Railroad—consists of 40 acres of land, convenient house containing 11 rooms, a large barn 60 by 40 feet, a grape house in full bearing, pig sty, hen house, orchard and garden, well stocked with apples, pears, peaches, plums, currants, raspberries and strawberries; also, a never failing fountain of water carried into the house, grapery and barn-yard.

If not sold previous to the 10th of April, this estate will then be offered at auction. Possession given by the middle of April. For further particulars inquire of S. W. RODMAN, No. 11 Chestnut Street, or of the subscriber on the premises.

March 20, 1852. 4w*1 ALFRED RODMAN.

Farm for Sale in Concord, Mass.,

Situated half a mile from the village, on the road to Lowell, containing about seventy-five acres of good land, well divided into Mowing, Tillage, Pasturing and Woodland, and having thereon an excellent Orchard and Cranberry Meadow. Said farm is well enclosed with good walls, and is considered one of the pleasantest situations in the county of Middlesex. Connected with the farm, and lying about one and a half miles therefrom, is a good Pasture, containing about sixty acres, which will be sold with it, if desired.

For further particulars inquire of SIMON BROWN, Esq., editor of New England Farmer, or

Concord, Mass., Feb. 28. tf JOHN B. MOORE.

Pure Devon Stock.

COWS, HEIFERS, BULLS and BULL-CALVES for sale. Apply at Office of N. E. Farmer, or to the subscriber.

B. V. FRENCH,

Dec. 27, 1851. 1yr* Braintree, Mass.

Blood Stock for Sale.

THREE BULL CALVES; one will be one year old the 8th of March; one the thirtieth of March, and the other the 17th of May. All of them ¾ Durham and ¼ Ayrshire. And eifers to go with them, if desired.

Likewise, I offer for sale thirty young calves in March, April and May, sired by the *Bay State Sultan*, and from the best of blood cows. Persons wishing any of the above stock, will do well to call and examine for themselves; and I hesitate not in saying that the stock will suit, and is as good as any before offered.

Those who favored us with purchases last season, can be as well accommodated this.

☞ Letters by mail for further information will receive prompt attention. S. T. ATHERTON.

South Groton, Mass., March 2, 1852. 3w*1

Cattle Ties.

OX AND COW TIES, of all sizes, a large assortment; also, Draft and Trace Chains; just received and for sale low by RUGGLES, NOURSE, MASON & CO., (over the Market,) Boston. 3m* Jan. 10.

For Sale,

Four pleasantly situated dwellings in ELIOT STREET, JAMAICA PLAIN.

Also, two farms on WELD STREET, WEST ROXBURY;—the one containing about forty acres, with house and barn; the other containing about twenty-three acres, with house and two barns.

But a small portion of cash is wanted for any of this property. Apply to J. C. GORE, Jamaica Plain.

Feb. 21, 1852. 2m—*2

Ayer's Cherry Pectoral,

FOR THE CURE OF

COUGHS, COLDS, HOARSENESS, CROUP, WHOOPING COUGH, BRONCHITIS, ASTHMA AND CONSUMPTION.

THIS invaluable remedy for all diseases of the Throat and Lungs has attained a celebrity, from its remarkable cures, never equalled by any other medicine before. Other preparations have shown themselves *palliatives*, and sometimes effected notable cures, but none has ever so fully won the confidence of every community where it is known. After years of trial in every climate, the results have indisputably shown it to possess a mastery over this dangerous class of diseases which could not fail to attract the attention of physicians, patients and the public generally.

See the statements, not of obscure individuals, and from far distant places, but of men who are known and respected throughout the country.

The widely-celebrated surgeon, Dr. VALENTINE MOTT, of New York city, says:—"It gives me pleasure to certify the value and efficacy of "*Ayer's Cherry Pectoral*," which I consider peculiarly adapted to cure diseases of the throat and lungs."

Dr. PERKINS, the venerable President of the Vermont Medical College, one of the eminently learned physicians of this country, writes, the *Cherry Pectoral* is extensively used in this section, where it has shown unmistakable evidence of its happy effects upon pulmonary diseases.

Rev. JNO. D. COCHRANE, a distinguished clergyman of the English Church, writes to the proprietor from Montreal that "he has been cured of a severe asthmatic affection, by *Cherry Pectoral*." His letter, at full length, may be found in our Circular, to be had of the Agent, and is worth the attention of asthmatic patients

This letter is from the well-known Druggist at Hillsdale, Michigan, one of the largest dealers in the State; and this case is from his own observation:

HILLSDALE, MICH., Dec. 10, 1849.

Dear Sir:—Immediately on receipt of your *Cherry Pectoral* I carried a bottle to an acquaintance of mine who was thought to be near his end with quick consumption. He was then unable to rise from his bed, and was extremely feeble. His friends believed he must soon die, unless relief could be obtained for him, and I induced them to give him your excellent medicine a trial. I immediately left town for three weeks, and you may judge of my surprise on my return, to meet him in the street on my way home from the cars, and find he had entirely recovered. Four weeks from the day he commenced taking your medicine, he was at work at his arduous trade of a blacksmith.

There are other cases within my knowledge, where the Cherry Pectoral has been singularly successful, but none so marked as this. Very truly yours,

G. W. UNDERWOOD.

PREPARED AND SOLD BY JAMES C. AYER,
Practical Chemist, Lowell, Mass.

Feb. 14, 1852. 3m

American Veterinary Journal,

DEVOTED to the Diffusion of Veterinary Knowledge, and its collateral sciences. Published monthly, octavo form, containing thirty-two pages, making at the end of the year a handsome volume of three hundred and eighty-four pages, to which an index will be furnished.

Price $1,00 per year in advance. Six copies for $5,00.

Edited by GEORGE H. DADD, Veterinary Practitioner, to whom all communications, *post-paid*, must be directed.

Boston, Feb. 14. 2w—*2

Spring Seed Grain.

300 BUSHELS WHEAT, (*Black, Sea, Scotch Fife, Bald Club* and *Java*.

200 bushels Buckwheat.
800 do. Barley.
200 do. Spring Rye,—(*True.*)
800 do. Bedford Oats.
100 do. Millett.
10 do. African Millett,—(*Extra.*)

For sale by RUGGLES, NOURSE, MASON & CO.,
March 20, 1852. tf Over Quincy Market, Boston.

LEWIS G. MORRIS'

THIRD ANNUAL SALE, BY AUCTION, OF

Improved Breeds of Domestic Animals

WILL TAKE PLACE AT

MOUNT FORDHAM, Westchester Co., (11 miles from City Hall, New York,) on Wednesday, JUNE 9, 1852.

JAMES M. MILLER, Auctioneer.

APPLICATION need not be made at private sale, as I decline in all cases, so as to make it an object for persons at a distance to attend. Sale positive to the highest bidder, without reserve.

Numbering about fifty head of Horned Stock, including a variety of ages and sex, consisting of Pure Bred Short Horns, Devons, and Ayrshires; Southdown Buck Lambs, and a very few Ewes; Suffolk and Essex Swine. Catalogues, with full Pedigrees, &c., &c., will be ready for delivery on the first of May—to be obtained from the subscriber, or at the offices of any of the principal Agricultural Journals or Stores in the Union. This sale will offer the best opportunity to obtain very fine animals I ever have given, as I shall reduce my herd lower than ever before, contemplating a trip to Europe, to be absent a year, and shall not have another sale until 1854.

It will be seen by reference to the proceedings of our State Agricultural Society that I was the most successful exhibitor of Domestic Animals, at the late State Fair.

I will also offer a new feature to American Breeders—one which works well in Europe; that is, *letting the services of male animals;* and will solicit propositions from such as see fit to try it. CONDITIONS—The animal hired, to be at the risk of the owner, unless by some positive neglect or carelessness of the hirer; the expense of transportation to and from, to be borne jointly; the term of letting, to be one year or less, as parties agree; price to be adjusted by parties—to be paid in advance, when the Bull is taken away; circumstances would vary the price; animal to be kept in accordance with instructions of owner, before taking him away.

I offer on the foregoing conditions, three celebrated Prize Bulls, "Major," a Devon, nine years old; "Lamartine," Short Horn, four years old; "Lord Eryholme," Short Horn, three years old. Pedigrees will be given in Catalogues.

At the time of my sale, (and I would not part with them before) I shall have secured two or three yearly setts of their progeny; and as I shall send out in August next a new importation of male animals, I shall not want the services of either of these next year. I would not sell them, as I wish to keep control of their propagating qualities hereafter.

I also have one imported Buck, the prize winner at Rochester last fall, imported direct from the celebrated Jonas Webb; and also five yearling Bucks, winners also, bred by me, from Bucks and Ewes imported direct from the above celebrated breeder; they will be let on the same conditions as the Bulls, excepting that I will keep them until the party hiring wishes them, and they must be returned to me again on or about Christmas Day. By this plan, the party hiring gets rid of the risk and trouble of keeping a Buck the year round. All communications by mail must be prepaid, and I will prepay the answers. L. G. MORRIS.

Mount Fordham, March, 1852. 1w*3m

Walnut Grove Nursery.

JAMES HYDE & SON.

We have for sale at our Nursery a larger assortment of trees than ever before offered by us, consisting in part of Apple, Pear, Plum, Cherry and Peach.

Also, Quinces, Currants, Raspberries, Grapevines, &c. &c.

Ornamental Trees and Shrubs, Buckthorn Plants, &c. &c.

A prime lot of Red Dutch Currants, good size, $5 per hundred, or $40 per thousand.

Fine Apple trees, three to five years' growth from bud, seven to nine feet high, $25 per hundred, or $200 per thousand.

We devote ourselves solely to the raising of trees; they receive our strict personal attention; we are therefore able to warrant every article true to name.

Those who intend purchasing large quantities of Apple trees are respectfully invited to call before purchasing, and examine our stock, as it is large, and doubtless unsurpassed by any in the vicinity.

A liberal discount on all articles by the hundred.

Orders for Scions, (if sent early,) faithfully attended to.

Trees delivered in Boston free of expense, packed if desired.

Catalogues sent to *post-paid* applicants.

☞All orders thankfully received, and promptly executed.

JAMES HYDE & SON.

Newton Centre, Feb. 21, 1852. 3m*

Bound Volumes.

BACK VOLUMES of the NEW ENGLAND FARMER, elegantly bound in Muslin, Gilt and Embossed, are now for sale at this office.

Boston, March 20, 1852. tf

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Fruit Trees---Fruit Stocks.

The subscriber offers for sale at the nursery of the late S. W. COLE, in Chelsea, a general assortment of Apple, Pear, Plum, Cherry and Peach trees, among which are many new and superior varieties, such as choice kinds of Apples, Kirkland's new Cherries, McLaughlin and other Plums, and hardy seedling Peaches of northern origin.

Also, Grape-vines, Quinces, Currants, Gooseberries, Raspberries, Thimbleberries and Cranberries. Among the Grapes are the famous Diana. Among the Gooseberries are Houghton's Seedling, the most valuable of all varieties, being hardy against the blight, and a great grower and bearer.

12,000 Cherry Stocks, from one to three years old.

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Also, Pear, Plum and Quince Stocks, in smaller quantities.

☞ All orders thankfully received, and promptly executed, under the superintendence of an experienced nurseryman.

MARTHA S. COLE.

☞ Ruggles, Nourse, Mason & Co., Agents, Quincy Hall, Boston. tf* March 6.

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Pear, Apple, Peach, Cherry and Plum Trees of choice standard varieties. Also Quinces, Gooseberries, Currants, Raspberries, Strawberries, Grape Vines, &c.

Extra sized Hamburghs for the Conservatory or Grapery. A fine lot of Cherry and Apple Trees, two to four years from bud. The whole for sale at reduced prices.

D. & G. F. STONE,
Hammond Street, East Newton.

Jan. 10, 1852. w16t—*4t

Seed Potatoes.

CHOICE Early and Late sorts can be procured at our Seed Store. We invite particular attention to the "Eastern Early Blue," for very early, and the "Danvers Seedling" for late crops; of the latter sort 882 bushels were grown from 28 bushels of seed, the past summer.

RUGGLES, NOURSE, MASON & CO.,
Boston, March 27. Over Quincy Market.

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☞ WEEKLY, ☜

AN INDEPENDENT JOURNAL,—PUBLISHED EVERY SATURDAY, ON A LARGE, HANDSOME FOLIO SHEET.

The proprietors design furnishing a first-class Agricultural and Family Newspaper—a journal which shall be valuable to the Farmer, the Mechanic, and all other professions; and at the same time, equally welcome to the Home Circle. They are happy in announcing the names of SIMON BROWN as Editor, and FREDERICK HOLBROOK and HENRY F. FRENCH, Associate Editors,—gentlemen who have had practical experience on their own farms, and who are too well known by the public to require any farther introduction or recommendation from us.

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The other departments of the paper, under the charge of WILLIAM SIMONDS, will include a full and careful report of the news of the week, such as Domestic, Foreign and Marine Intelligence, Congressional and Legislative proceedings, Temperance and Religious Intelligence, and a general variety of Literary and Miscellaneous matter, adapted to family reading, comprising more useful and valuable reading matter than any other Agricultural Newspaper published in New England. Everything of a hurtful or even doubtful tendency will be carefully excluded from its columns.

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Orders from a distance will receive prompt attention.

Albany, N. Y., March 20. 1w—*6 JOHN GOTT.

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Second Importation of Shanghaes.

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March 20, 1852. 4w*1℔ Stonington, Ct.

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SITUATION WANTED, as Farmer or Gardener, by a man who has had much experience in the different departments of his profession now in practice in Europe, which his testimonials will verify. Good reference given.

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March 27, 1852. 4w*1℔